AD0004074C1
A1

Service Manual

Stereo Radio Cassette Player

DOLBY B NR

RQ-SX77V

AR10 Mechanism Series

Colour

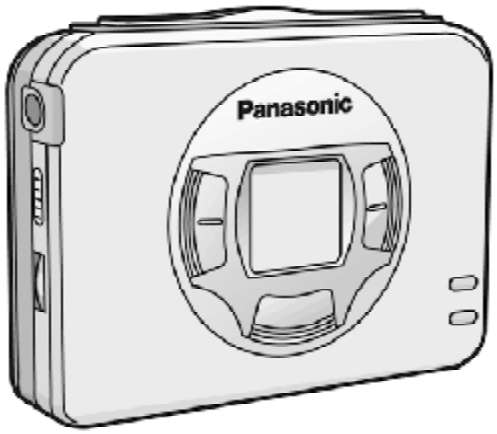
(S).....Silver Type

Area

(P).....U.S.A.

<Note>

Please dispose of the service manual for Model No. RQ-SX77V(P) TENTATIVE, Order No. AD0002039A1 and use this service manual.



SPECIFICATIONS

Specifications

RADIO

Frequency Range:
- **FM;** 87.9 – 107.9 MHz (0.2 MHz steps)
  87.5 – 108.0 MHz (0.1 / 0.05 MHz steps)
- **AM;** 520 – 1710 kHz (10 kHz steps)
  522 – 1629 kHz (9 kHz steps)

Intermediate Frequency:
- **FM;** 10.7 MHz
- **AM;** 450 kHz

Sensitivity:
- **FM;** 2.5 μV/ 0.5 mW output
- **AM;** 421 μV/ m/ 0.5 mW output

CASSETTE PLAYER

Track system: 4 track, 2 channel, stereo
Frequency Range (Normal/High/Metal): 40 ~ 18,000 Hz
Motor: Electrical governor motor
Tape Speed: 4.8 cm/s

GENERAL

Output jack: HEADPHONES; 24 Ω
Power Output: 2.5 mW + 2.5 mW (RMS...max.)
Power Requirement:
- **Rechargeable Battery;** DC 1.2 V (included Rechargeable Battery)
- **Battery;** DC 1.5 V (one R6/LR6, AA, UM-3 battery)

Dimensions (W × H × D): 108.8 × 78.5 × 20.7 mm ($4^{5}/_{16}$" × $3^{1}/_{16}$" × $^{13}/_{16}$")
Weight: 174 g (6.1 oz.) (with rechargeable battery)

CHARGER

Input: AC 120 V, 60 Hz
Output; DC 1.2 V, 350 mA

Play time:
Approximate operating time in hours (in hold mode, at 25 °C, on a flat, stable surface).

Function / Battery type	Tape	Radio
Rechargeable battery *	17 h	13 h
Panasonic alkaline battery	57 h	45 h
Rechargeable battery * and Panasonic alkaline battery	72 h	56 h

* When the included rechargeable battery is fully recharged (2 hours required).
- The play time may be less depending on the operating conditions.

- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "Dolby" and the double-D symbol □□ are trademarks of Dolby Laboratories Licensing Corporation.

Note: Design and specifications are subject to change without notice. Weight and dimensions are approximate.

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⚠ WARNING

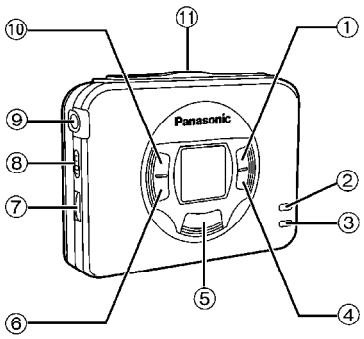
This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

1. Accessories

- Battery charger
  (RP-BC156BPY).....1pc.
- Stereo headphones
  (RFEV711P-KY).....1pc.
- Remote controller
  (RFEV012P-KS).....1pc.
- Rechargeable battery (with case)
  (RP-BP61PYS11).....1pc.
- Dry cell battery case
  (RFAT0002-H).....1pc.
- Carring case
  (RFC0056-K).....1pc.

2. Location of Controls



① FF / Tuning + button (FF / +)
② Sound select / battery condition check button (SOUND SEL / BATT)
③ Tuning mode select button (TUNING MODE)
④ REW / Tuning − button (REW / −)
⑤ Radio / band select button (RADIO / BAND)
⑥ Stop / power off button (■ / OFF)
⑦ Headphone volume control (VOLUME)
⑧ Hold switch (HOLD)
⑨ Headphone jack (🎧)
⑩ Playback / direction button (◀▶)
⑪ Cassette lid open knob

3. Service Mode

The RQ-SX77V has a Service mode designed to help identify faulty parts in the event of an error. / This mode is especially useful when servicing is carried out.

Items required

- Stereo earphones or stereo headphones
- Rechargeable battery or dry cell (R6/LR6, AA, UM-3) housed in case

Service mode functions

1. Unit and stereo earphones test
This checks for problems existing in the unit or stereo earphones.

2. Amplifier test
This test should be run if an “amplifier failure” occurred during test 1. above.

3.1. Unit and stereo earphones test

Preparations:

1. Remove the unit case by following “Operation Checks and Component Replacement Procedures”.

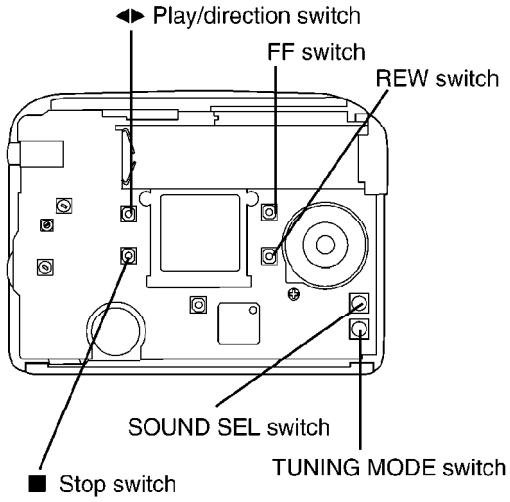
2. Plug the stereo earphones into the headphones jack.

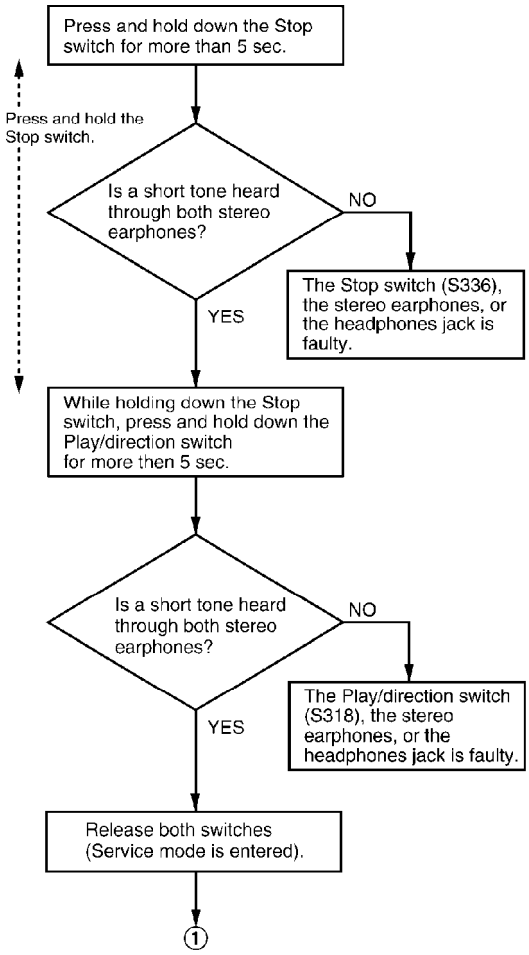
3. Insert a fully-charged rechargeable battery or a dry cell (R6/LR6, AA, UM-3) (housed in battery case).

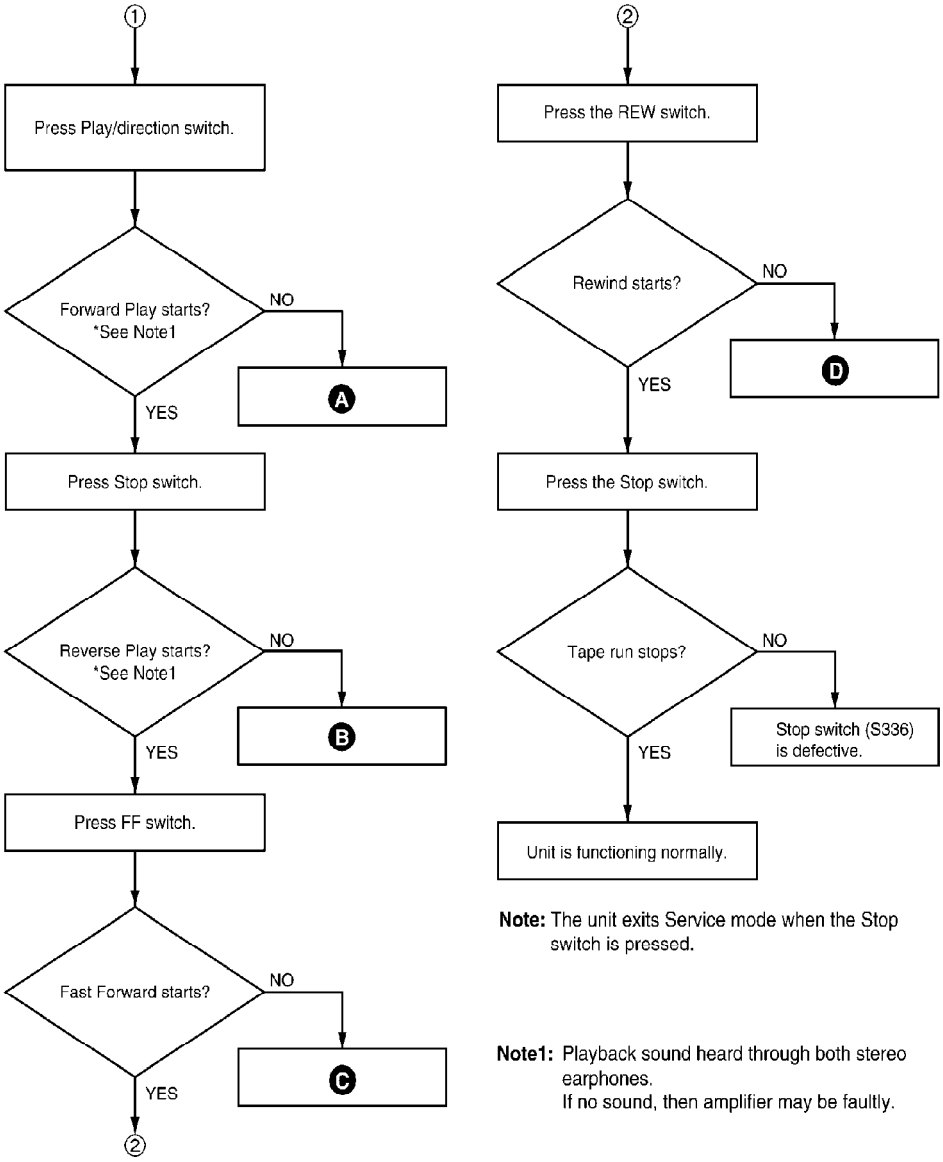
4. Insert cassette tape.

5. Release the hold mode.

Operation switches




Press and hold down the Stop switch for more than 5 sec.
Press and hold the Stop switch.
Is a short tone heard through both stereo earphones?
NO
The Stop switch (S336), the stereo earphones, or the headphones jack is faulty.
YES
While holding down the Stop switch, press and hold down the Play/direction switch for more then 5 sec.
Is a short tone heard through both stereo earphones?
NO
The Play/direction switch (S318), the stereo earphones, or the headphones jack is faulty.
YES
Release both switches (Service mode is entered).
①



Note: The unit exits Service mode when the Stop switch is pressed.

Note1: Playback sound heard through both stereo earphones.
If no sound, then amplifier may be faultly.

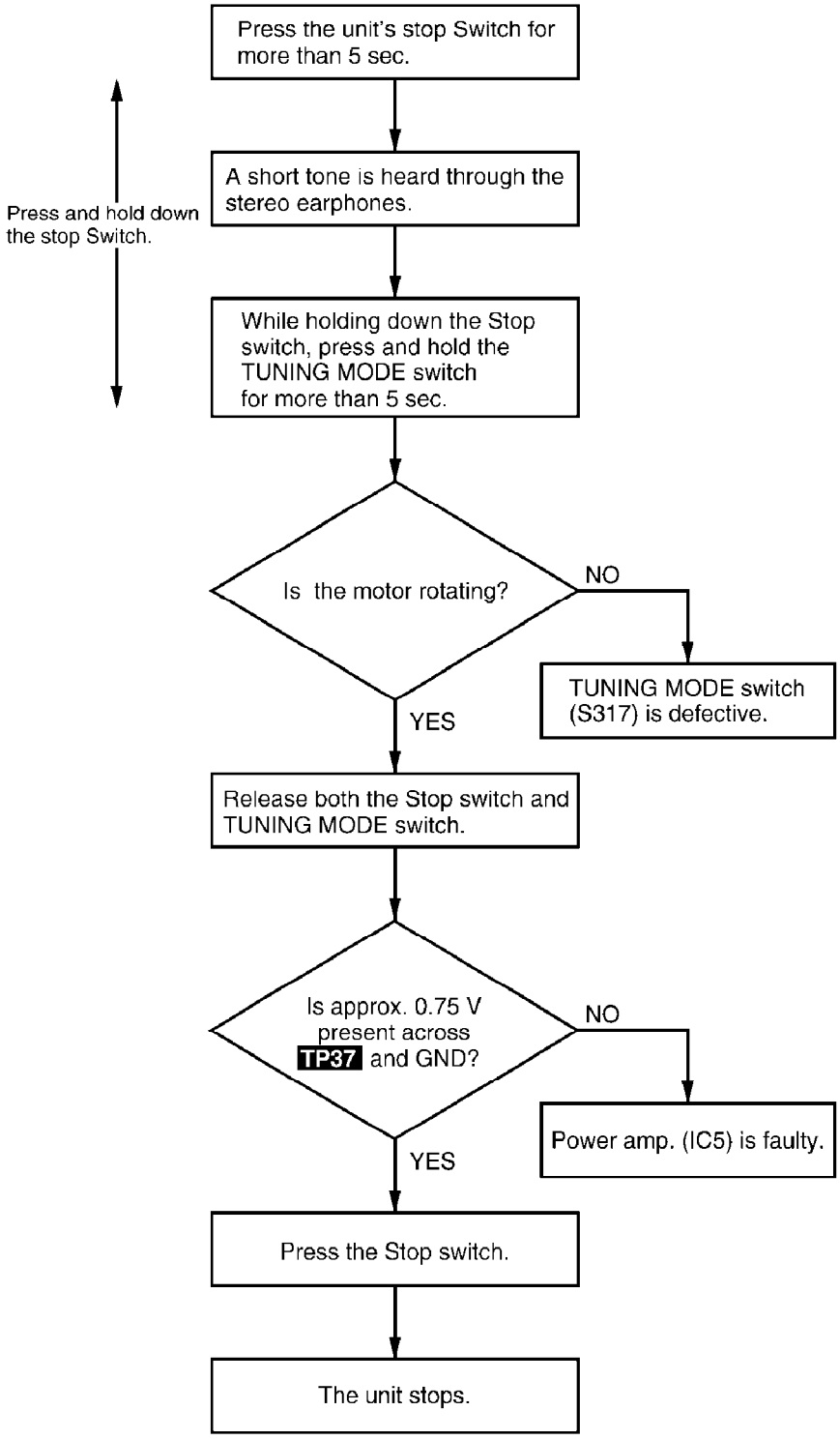
● **Troubleshooting**

Step	Symptom	Fault Location
Ⓐ	Playback or reverse fails if Play/direction switch is pressed.	S318, S336 or motor may be faulty.
Ⓑ		
Ⓒ	Fast Forward fails to start if FF switch is pressed.	S313 may be defective.
Ⓓ	Rewind fails to start if REW switch is pressed.	S314 may be defective.

3.2. Amplifier test

This test is required if the amplifier is found to be malfunctioning thorough 3.1. Unit and stereo earphone test.

Preparations:
See 3.1. Unit and stereo earphone test.


Press the unit's stop Switch for more than 5 sec.
Press and hold down the stop Switch.
A short tone is heard through the stereo earphones.
While holding down the Stop switch, press and hold the TUNING MODE switch for more than 5 sec.
Is the motor rotating?
NO
TUNING MODE switch (S317) is defective.
YES
Release both the Stop switch and TUNING MODE switch.
Is approx. 0.75 V present across TP37 and GND?
NO
Power amp. (IC5) is faulty.
YES
Press the Stop switch.
The unit stops.

Note : The unit exits Service mode when the Stop switch is pressed.

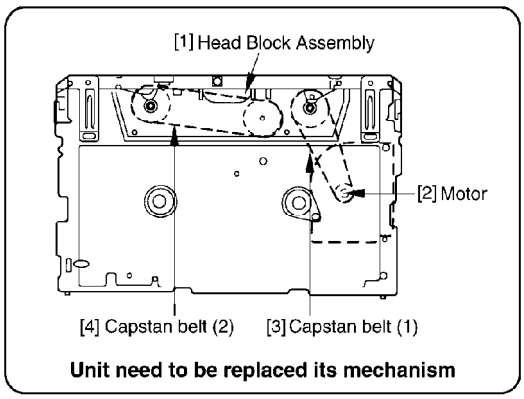
4. Mechanism Block Replacement Procedure

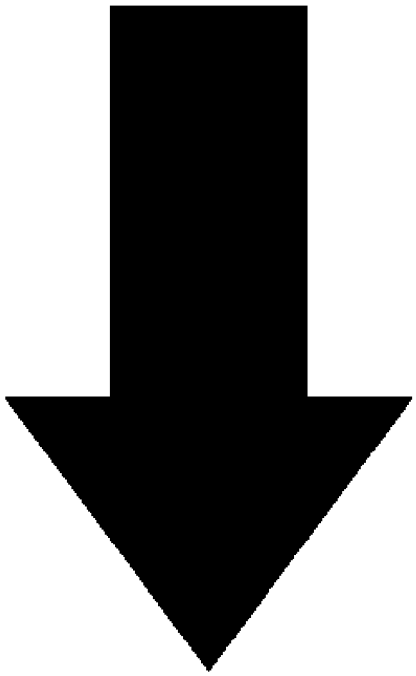
4.1. Replacing the tape transport assembly

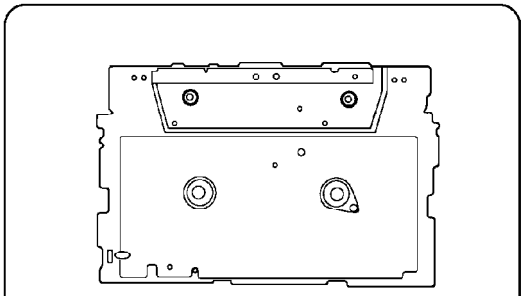
The tape transport mechanism is supplied semi-assembled.

Configuration:
Tape transport mechanism excluding the head block assembly, capstan motor and capstan belts (1) and (2).

When replacing the tape transport assembly, first remove the [1] head block assembly, [2] motor, [3] capstan belt (1) and [4] capstan belt (2) from the assembly to be replaced, then install these parts <[1] - [4]> onto the replacement assembly supplied. (For details of the dismantling procedure, see Operation Checks and Component Replacement Procedures.)







Supplied Tape Transport Assembly (semi-assembled)

Note:

After replacing, perform tape speed adjustment.

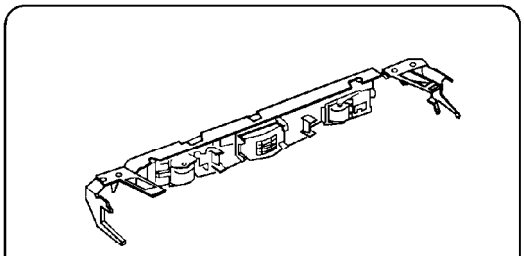
4.2. Replacing the head block assembly

The head block assembly is supplied semi-assembled.

Configuration:

Head block assembly with head arm spring and pinch roller arm assembly (F) and (R).

The head arm spring and pinch roller arm assembly (F) and (R) will also be supplied separately from the head block assembly.



Head block assembly (semi-assembled)

Note:

The head block assembly requires no azimuth adjustment.

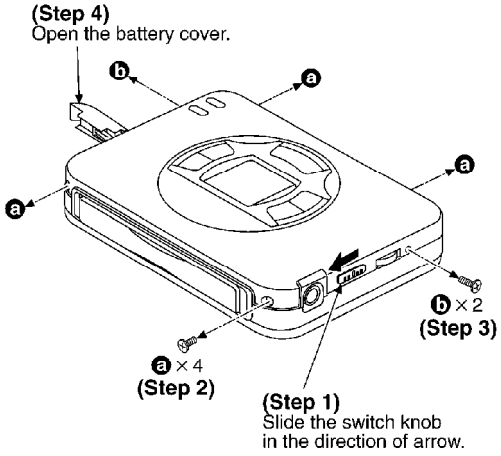
5. Operation Checks and Component Replacement Procedures

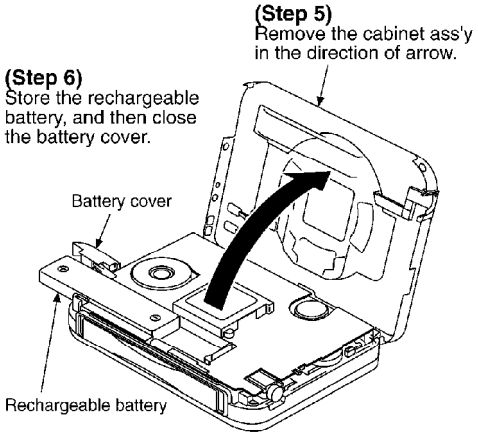
- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.

- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

5.1. Checking for the main P.C.B.

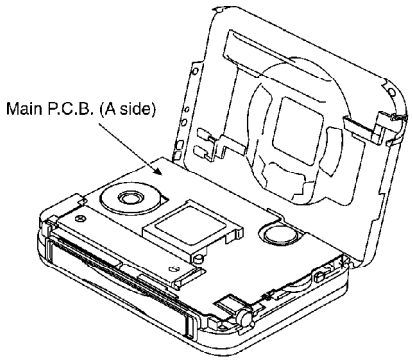
5.1.1. Checking for the main P.C.B. / (A side)





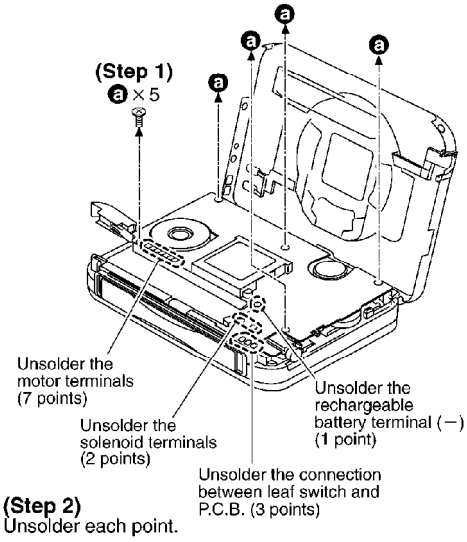
NOTE:
The rechargeable battery should be recharged fully.

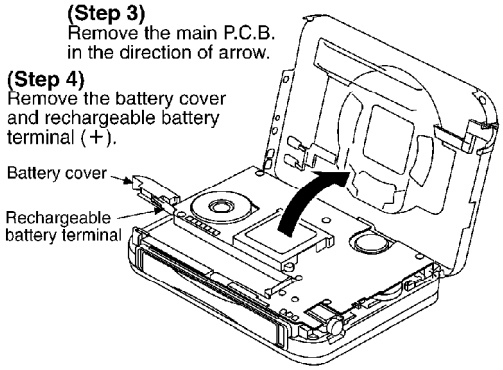
- Check the main P.C.B. (A side) as shown below.



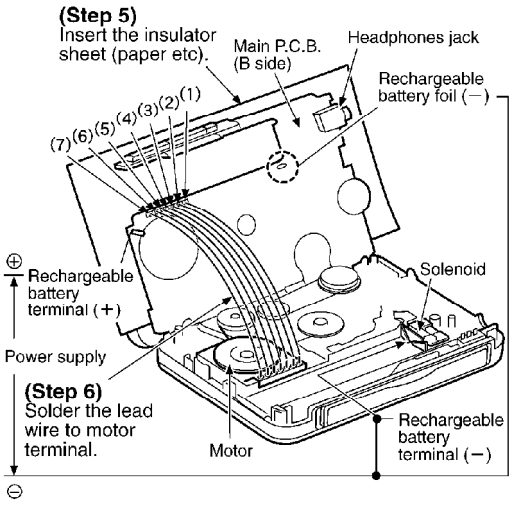
5.1.2. Checking for the main P.C.B. / (B side)

- Follow the (Step 1) - (Step 5) of item 5.1.1.


(Step 1)
ⓐ × 5
Unsolder the motor terminals (7 points)
Unsolder the solenoid terminals (2 points)
Unsolder the rechargeable battery terminal (−) (1 point)
Unsolder the connection between leaf switch and P.C.B. (3 points)
(Step 2)
Unsolder each point.


(Step 3)
Remove the main P.C.B. in the direction of arrow.
(Step 4)
Remove the battery cover and rechargeable battery terminal (+).
Battery cover
Rechargeable battery terminal

- Check the main P.C.B. (B side) as shown below.

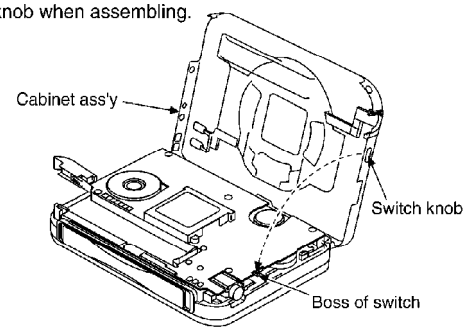


■Operation Checks

Confirm that the beeper sounds once by headphones when depressing the STOP (■) button more than 5 sec. under above condition, and then depress the STOP (■) and TUNING MODE buttons at same time more than 5 sec., so the FF mode will be operated.
Depress the STOP (■) button, and then that operation will be stopped.

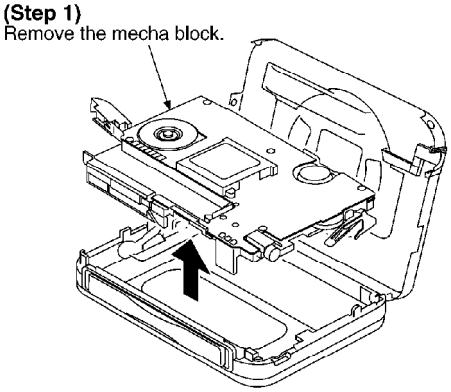
Notice for installing the cabinet ass'y

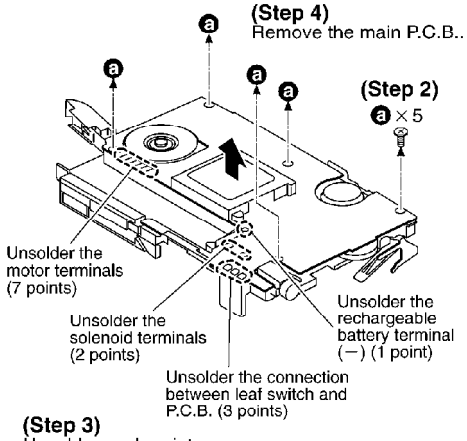
1. Make sure the boss of switch are fit in the switch knob when assembling.

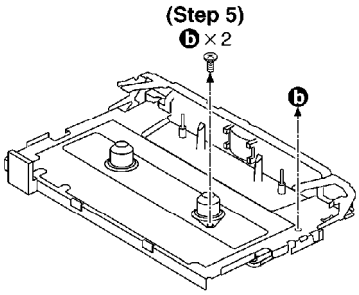


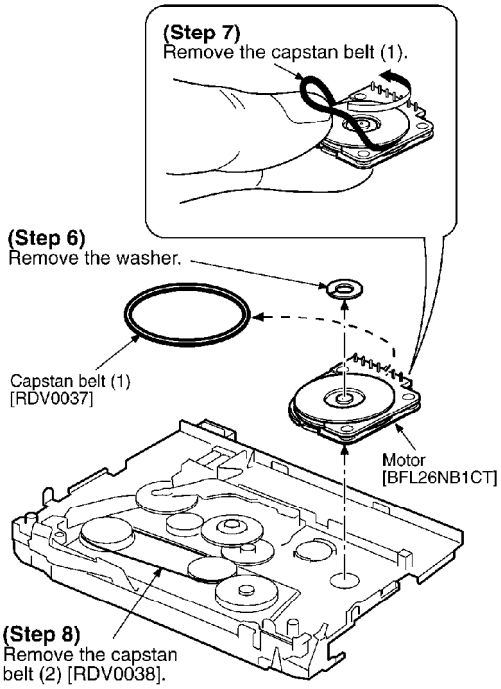
5.2. Replacement for the motor and capstan belt

- Follow the (Step 1) - (Step 5) of item 5.1.1.



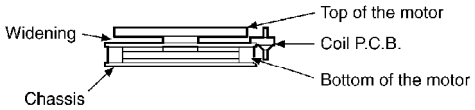

(Step 4)
Remove the main P.C.B..
(Step 2)
ⓐ × 5
Unsolder the
motor terminals
(7 points)
Unsolder the
solenoid terminals
(2 points)
Unsolder the
rechargeable
battery terminal
(−) (1 point)
Unsolder the connection
between leaf switch and
P.C.B. (3 points)
(Step 3)
Unsolder each point.

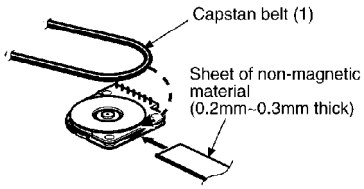

(Step 5)
ⓑ × 2

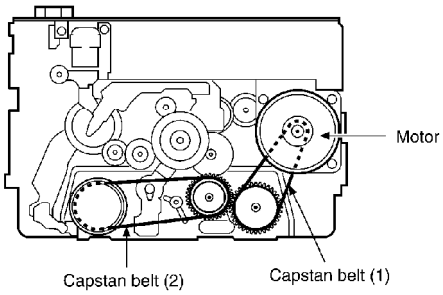

(Step 7)
Remove the capstan belt (1).
(Step 6)
Remove the washer.
Capstan belt (1)
[RDV0037]
Motor
[BFL26NB1CT]
(Step 8)
Remove the capstan
belt (2) [RDV0038].

Installing the capstan belt (1)

- When install the capstan belt (1) to motor, push up the motor by insert the non-magnetic material sheet between bottom of the motor and the chassis, and install the capstan belt (1) between top of the motor and the coil P.C.B..



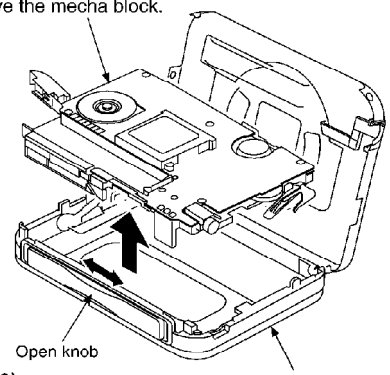




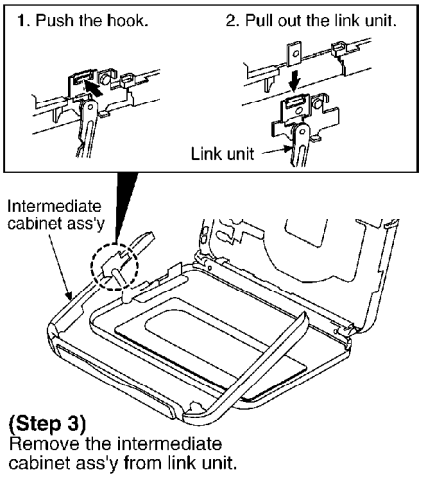
5.3. Replacement for the cassette lid ass'y

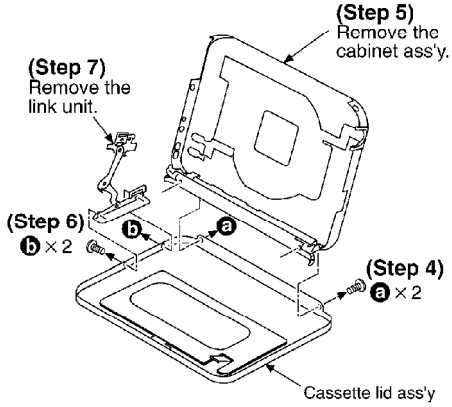
- Follow the (Step 1) - (Step 5) of item 5.1.1.

(Step 1)
Remove the mecha block.



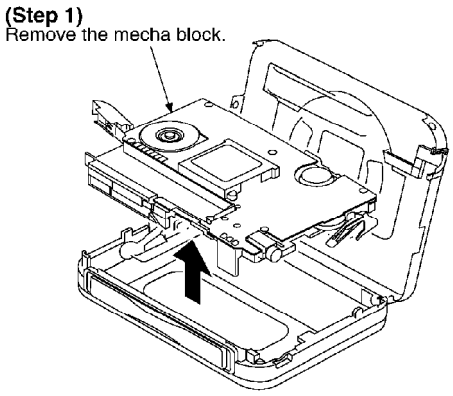
(Step 2)
Push the open knob, and then open the cassette lid ass'y.

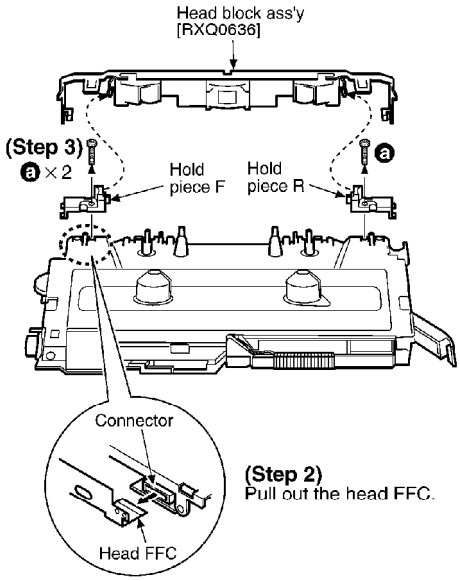

1. Push the hook.
2. Pull out the link unit.
Link unit
Intermediate cabinet ass'y
(Step 3)
Remove the intermediate cabinet ass'y from link unit.



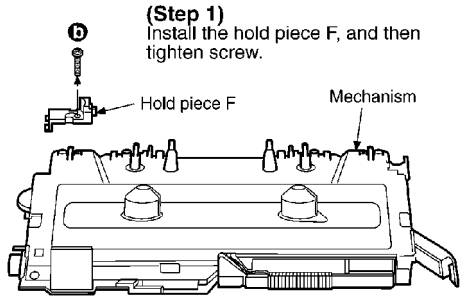
5.4. Replacement for the head block ass'y

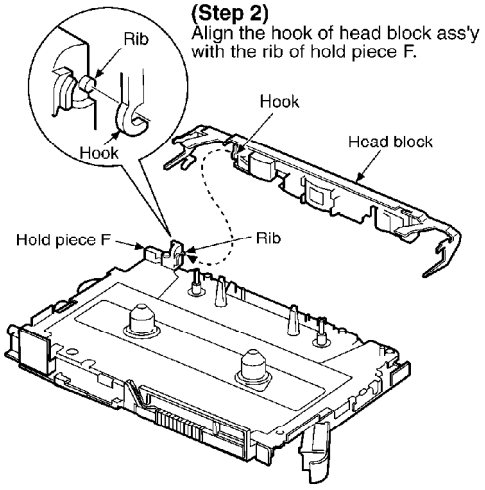
- Follow the (Step 1) - (Step 5) of item 5.1.1.



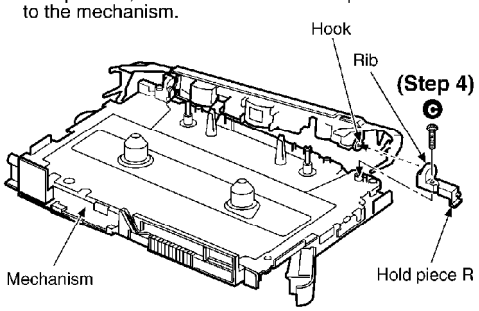


Assembly procedures for head block ass'y after replacement





(Step 3)
Align the hook of head block ass'y with the rib of hold piece R, and then install the hold piece R to the mechanism.



6. Block Diagram

7. Check Point of Signal

CHECK ITEM		TEST POINT
HEAD ↓ PRE AMP.	FWD Lch	TP39
	FWD Rch	TP40
	REV Lch	TP38
	REV Rch	TP41
	VREF	TP37
PRE OUT	Lch	TP36
	Rch	TP34
	GND	TP25
DOLBY OUT ↓ VOLUME VR	Lch	TP31
	Rch	TP30
	GND	TP25
POWER AMP.	Lch	HEADPHONES JACK
	Rch	HEADPHONES JACK
	GND	HEADPHONES JACK
DC CONVERTER	2.2V OUTPUT	TP4
	GND	TP25
TAPE END PULSE	FWD PULSE	TP46
	GND	TP25

8. Type Illustration of ICs, Transistors and Diodes

9. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

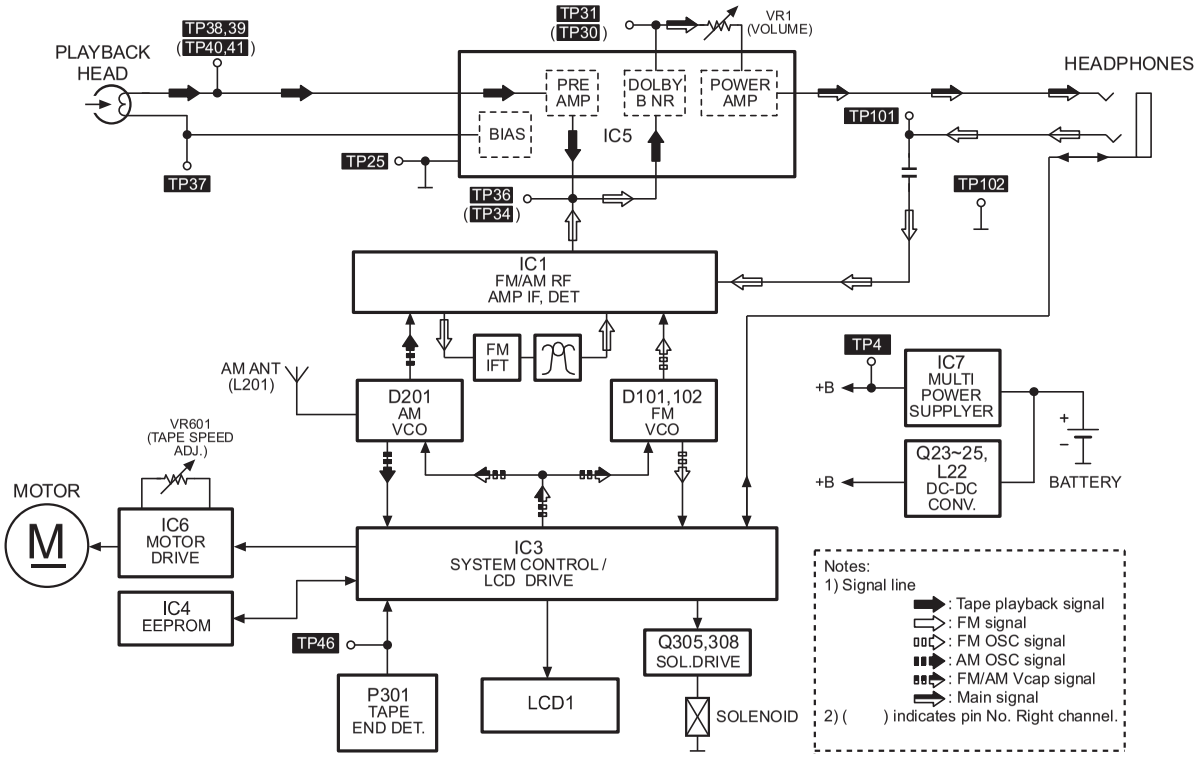
S13-1:

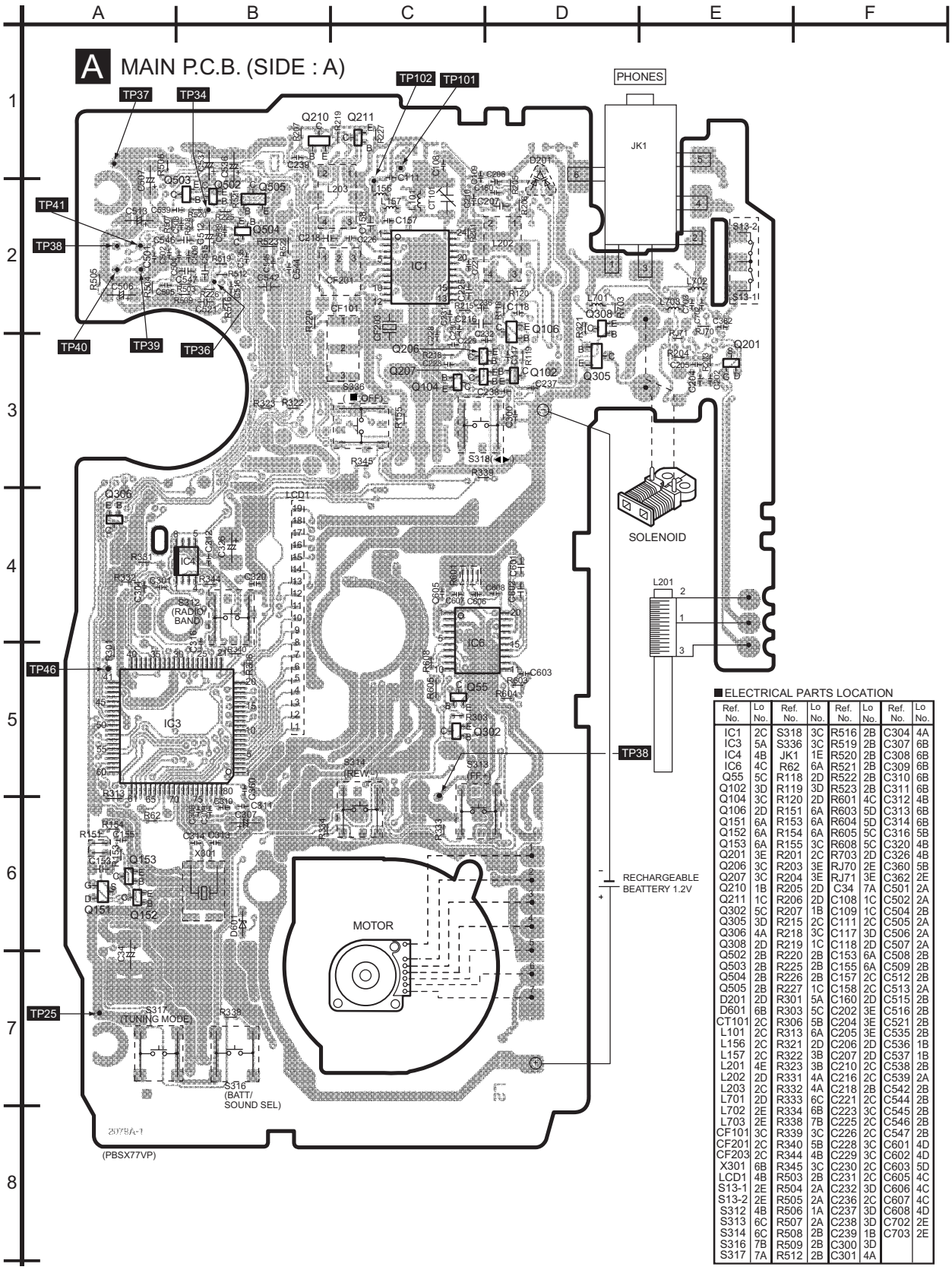
Cassette half detect switch / (IN...ON, OUT...OFF)

S13-2:

Tape select switch / (NORMAL...ON, METAL/CrO2...OFF)

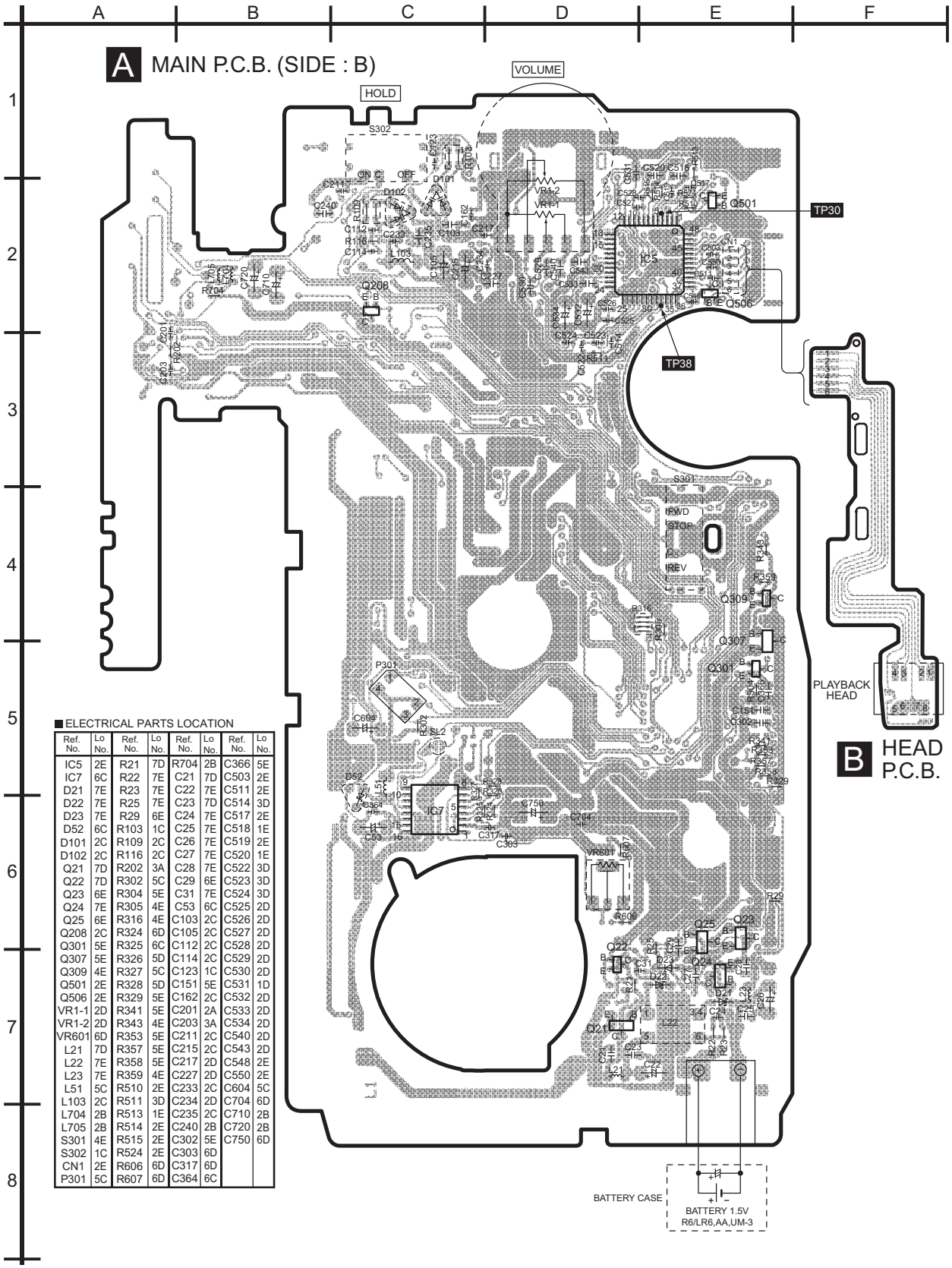
S301:


PLAYBACK HEAD
TP38,39
(TP40,41)
TP37
TP31
(TP30)
VR1
(VOLUME)
PRE AMP
DOLBY B NR
POWER AMP
BIAS
IC5
TP25
TP36
(TP34)
HEADPHONES
TP101
TP102
IC1
FM/AM RF
AMP IF, DET
FM IFT
AM ANT
(L201)
D201
AM
VCO
D101,102
FM
VCO
TP4
IC7
MULTI
POWER
SUPPLYER
+B
+B
Q23~25,
L22
DC-DC
CONV.
BATTERY
VR601
(TAPE SPEED
ADJ.)
MOTOR
M
IC6
MOTOR
DRIVE
IC3
SYSTEM CONTROL /
LCD DRIVE
IC4
EEPROM
TP46
P301
TAPE
END DET.
LCD1
Q305,308
SOL.DRIVE
SOLENOID
Notes:
1) Signal line
: Tape playback signal
: FM signal
: FM OSC signal
: AM OSC signal
: FM/AM Vcap signal
: Main signal
2) ( ) indicates pin No. Right channel.



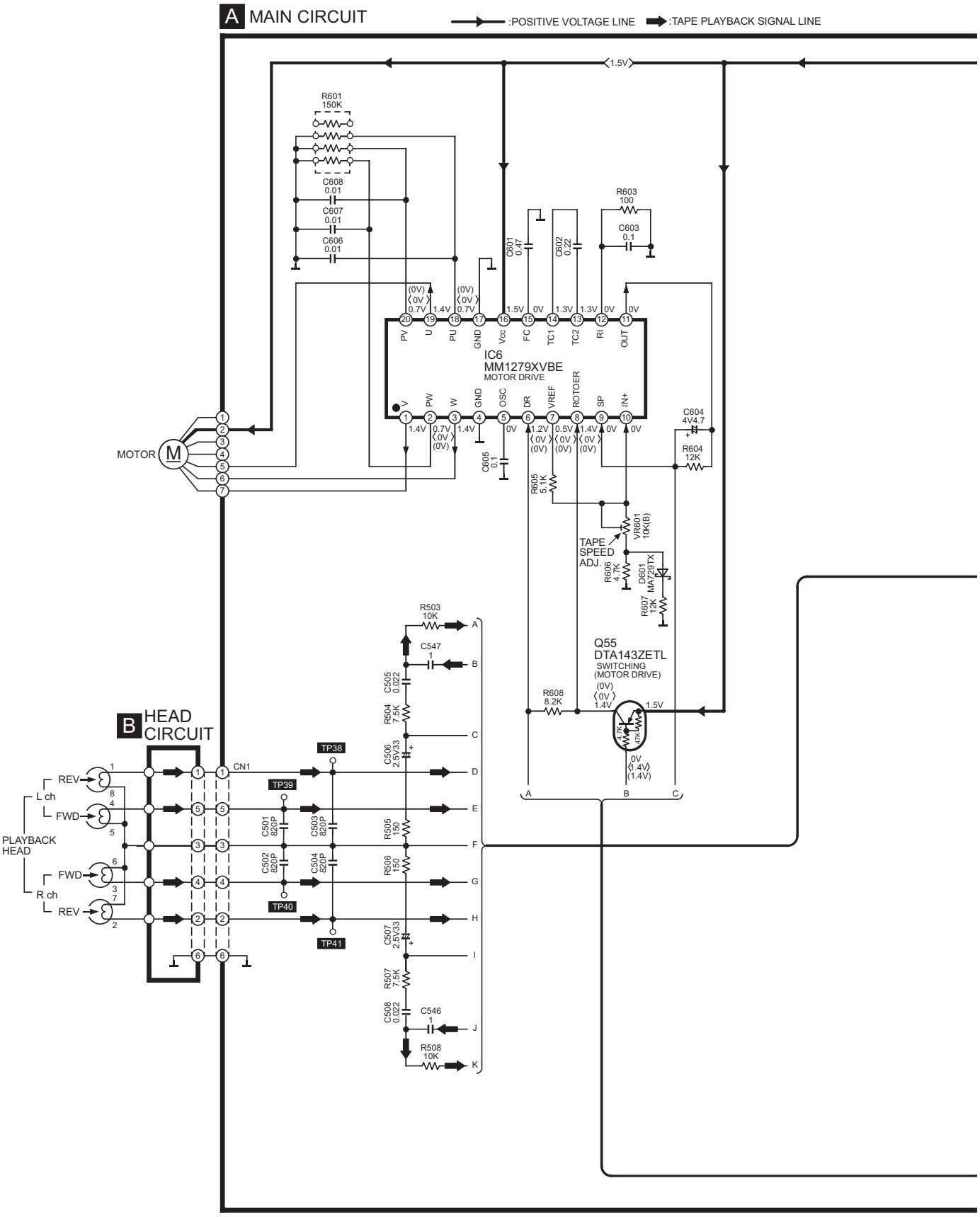
■ELECTRICAL PARTS LOCATION

Ref. No.	Lo No.	Ref. No.	Lo No.	Ref. No.	Lo No.	Ref. No.	Lo No.
IC1	2C	S318	3C	R516	2B	C304	4A
IC3	5A	S336	3C	R519	2B	C307	6B
IC4	4B	JK1	1E	R520	2B	C308	6B
IC6	4C	R62	6A	R521	2B	C309	6B
Q55	5C	R118	2D	R522	2B	C310	6B
Q102	3D	R119	3D	R523	2B	C311	6B
Q104	3C	R120	2D	R601	4C	C312	4B
Q106	2D	R151	6A	R603	5D	C313	6B
Q151	6A	R153	6A	R604	5D	C314	6B
Q152	6A	R154	6A	R605	5C	C316	5B
Q153	6A	R155	3C	R608	5C	C320	4B
Q201	3E	R201	2C	R703	2D	C326	4B
Q206	3C	R203	3E	RJ70	2E	C360	5B
Q207	3C	R204	3E	RJ71	3E	C362	2E
Q210	1B	R205	2D	C34	7A	C501	2A
Q211	1C	R206	2D	C108	1C	C502	2A
Q302	5C	R207	1B	C109	1C	C504	2B
Q305	3D	R215	2C	C111	2C	C505	2A
Q306	4A	R218	3C	C117	3D	C506	2A
Q308	2D	R219	1C	C118	2D	C507	2A
Q502	2B	R220	2B	C153	6A	C508	2B
Q503	2B	R225	2B	C155	6A	C509	2B
Q504	2B	R226	2B	C157	2C	C512	2B
Q505	2B	R227	1C	C158	2C	C513	2A
D201	2D	R301	5A	C160	2D	C515	2B
D601	6B	R303	5C	C202	3E	C516	2B
CT101	2C	R306	5B	C204	3E	C521	2B
L101	2C	R313	6A	C205	3E	C535	2B
L156	2C	R321	2D	C206	2D	C536	1B
L157	2C	R322	3B	C207	2D	C537	1B
L201	4E	R323	3B	C210	2C	C538	2B
L202	2D	R331	4A	C216	2C	C539	2A
L203	2C	R332	4A	C218	2B	C542	2B
L701	2D	R333	6C	C221	2C	C544	2B
L702	2E	R334	6B	C223	3C	C545	2B
L703	2E	R338	7B	C225	2C	C546	2B
CF101	3C	R339	3C	C226	2C	C547	2B
CF201	2C	R340	5B	C228	3C	C601	4D
CF203	2C	R344	4B	C229	3C	C602	4D
X301	6B	R345	3C	C230	2C	C603	5D
LCD1	4B	R503	2B	C231	2C	C605	4C
S13-1	2E	R504	2A	C232	3D	C606	4C
S13-2	2E	R505	2A	C236	2C	C607	4C
S312	4B	R506	1A	C237	3D	C608	4D
S313	6C	R507	2A	C238	3D	C702	2E
S314	6C	R508	2B	C239	1B	C703	2E
S316	7B	R509	2B	C300	3D		
S317	7A	R512	2B	C301	4A		

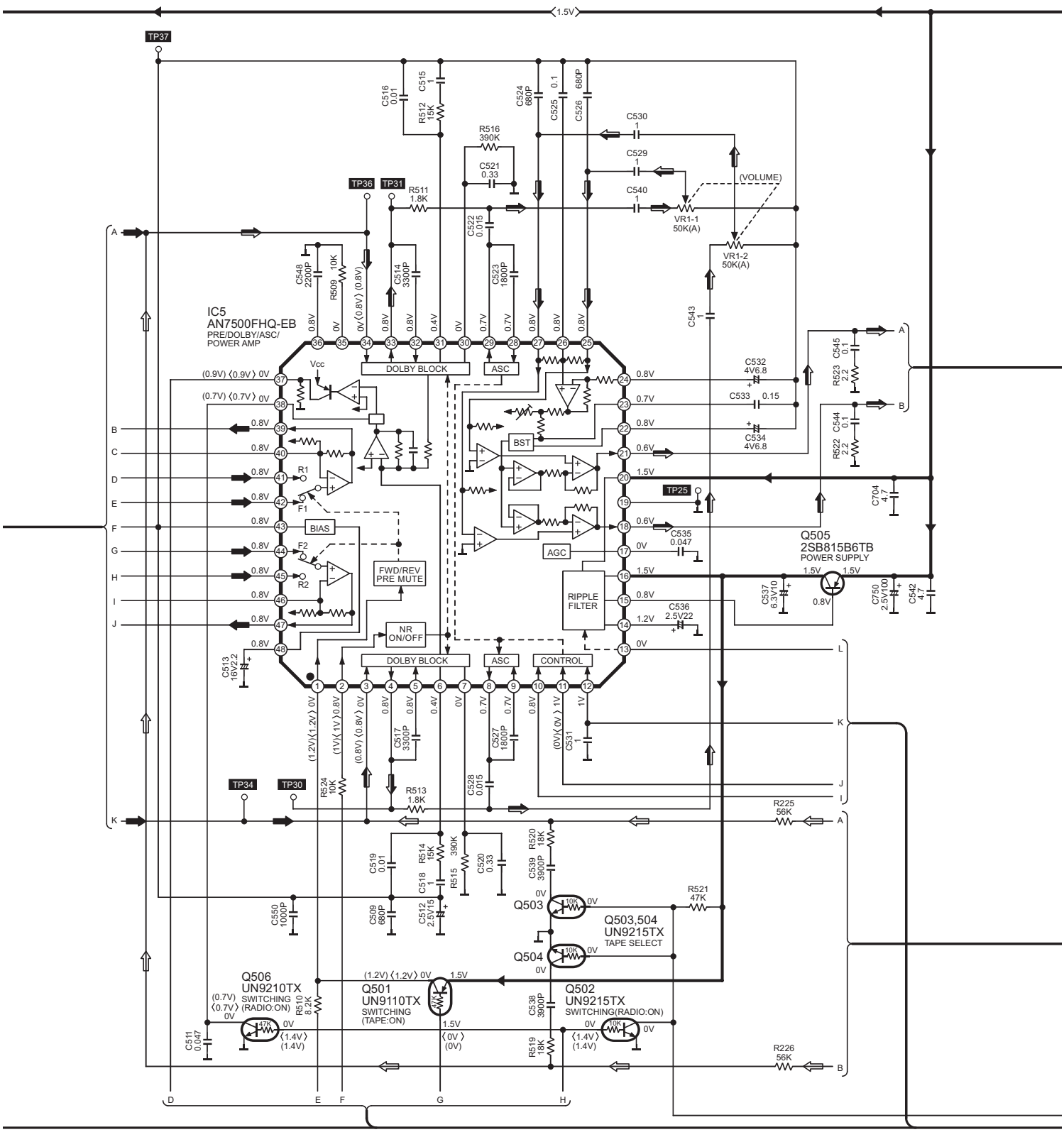


■ELECTRICAL PARTS LOCATION

Ref. No.	Lo No.	Ref. No.	Lo No.	Ref. No.	Lo No.	Ref. No.	Lo No.
IC5	2E	R21	7D	R704	2B	C366	5E
IC7	6C	R22	7E	C21	7D	C503	2E
D21	7E	R23	7E	C22	7E	C511	2E
D22	7E	R25	7E	C23	7D	C514	3D
D23	7E	R29	6E	C24	7E	C517	2E
D52	6C	R103	1C	C25	7E	C518	1E
D101	2C	R109	2C	C26	7E	C519	2E
D102	2C	R116	2C	C27	7E	C520	1E
Q21	7D	R202	3A	C28	7E	C522	3D
Q22	7D	R302	5C	C29	6E	C523	3D
Q23	6E	R304	5E	C31	7E	C524	3D
Q24	7E	R305	4E	C53	6C	C525	2D
Q25	6E	R316	4E	C103	2C	C526	2D
Q208	2C	R324	6D	C105	2C	C527	2D
Q301	5E	R325	6C	C112	2C	C528	2D
Q307	5E	R326	5D	C114	2C	C529	2D
Q309	4E	R327	5C	C123	1C	C530	2D
Q501	2E	R328	5D	C151	5E	C531	1D
Q506	2E	R329	5E	C162	2C	C532	2D
VR1-1	2D	R341	5E	C201	2A	C533	2D
VR1-2	2D	R343	4E	C203	3A	C534	2D
VR601	6D	R353	5E	C211	2C	C540	2D
L21	7D	R357	5E	C215	2C	C543	2D
L22	7E	R358	5E	C217	2D	C548	2E
L23	7E	R359	4E	C227	2D	C550	2E
L51	5C	R510	2E	C233	2C	C604	5C
L103	2C	R511	3D	C234	2D	C704	6D
L704	2B	R513	1E	C235	2C	C710	2B
L705	2B	R514	2E	C240	2B	C720	2B
S301	4E	R515	2E	C302	5E	C750	6D
S302	1C	R524	2E	C303	6D		
CN1	2E	R606	6D	C317	6D		
P301	5C	R607	6D	C364	6C		

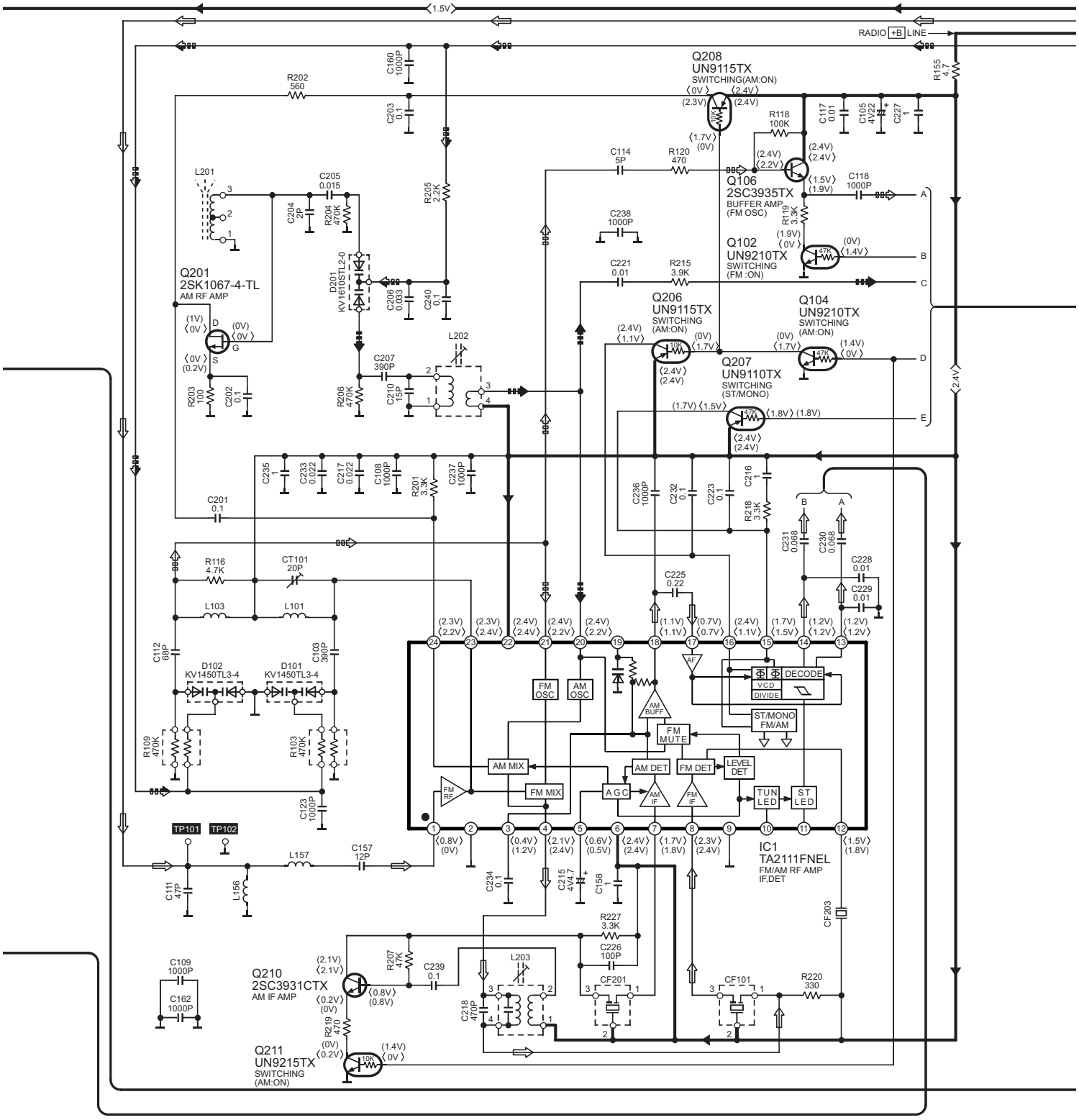

A MAIN CIRCUIT
:POSITIVE VOLTAGE LINE
:TAPE PLAYBACK SIGNAL LINE
1.5V
R601
150K
C608
0.01
C607
0.01
C606
0.01
C601
0.47
C602
0.22
R603
100
C603
0.1
IC6
MM1279XVBE
MOTOR DRIVE
PV
U
PU
GND
Vcc
FC
TC1
TC2
RI
OUT
V
PW
W
GND
OSC
DR
VREF
ROTOER
SP
IN+
MOTOR
M
C605
0.1
R605
5.1K
C604
4V4.7
R604
12K
VR601
10K(B)
TAPE
SPEED
ADJ.
R606
4.7K
D601
MA729TX
R607
12K
Q55
DTA143ZETL
SWITCHING
(MOTOR DRIVE)
R608
8.2K
B HEAD
CIRCUIT
CN1
TP38
TP39
TP40
TP41
REV
FWD
L ch
FWD
REV
R ch
PLAYBACK
HEAD
C501
820P
C502
820P
C503
820P
C504
820P
C505
0.022
C506
2.5V33
C507
2.5V33
C508
0.022
R503
10K
C547
1
R504
7.5K
R505
150
R506
150
R507
7.5K
C546
1
R508
10K
A
B
C
D
E
F
G
H
I
J
K

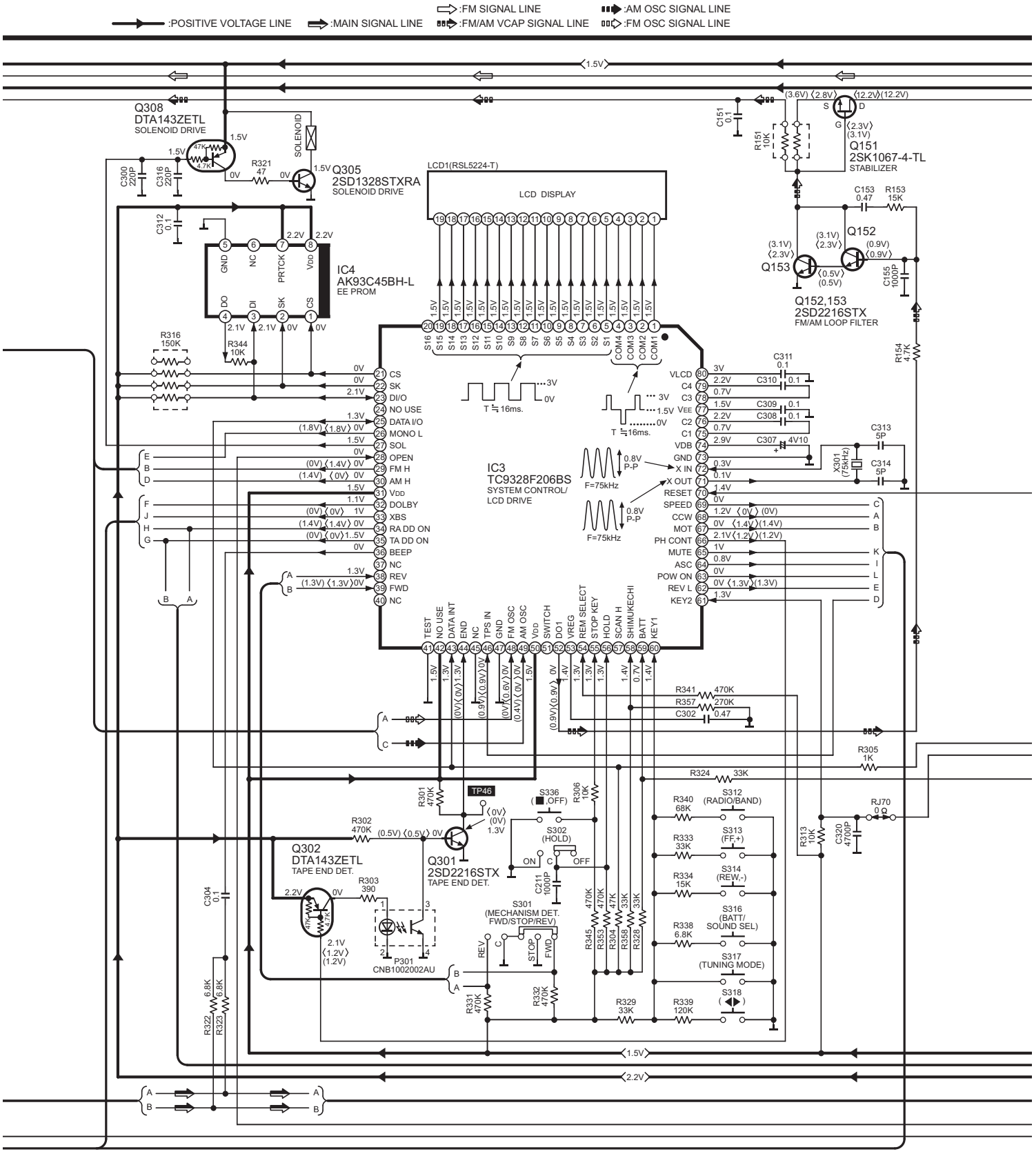
:TAPE PLAYBACK SIGNAL LINE :MAIN SIGNAL LINE
:POSITIVE VOLTAGE LINE :FM SIGNAL LINE

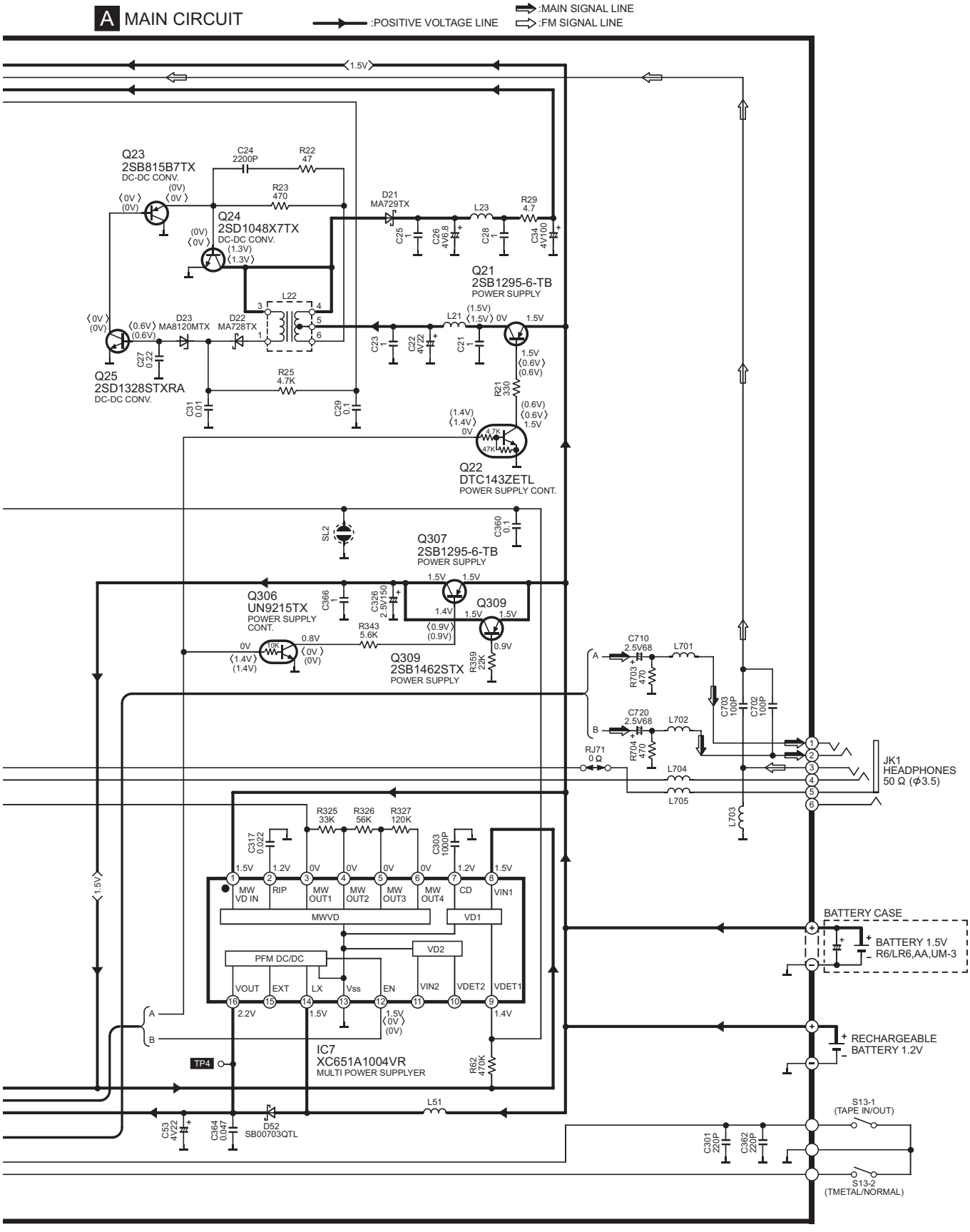


A MAIN CIRCUIT

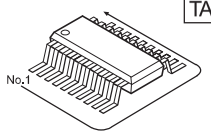
:POSITIVE VOLTAGE LINE
:FM SIGNAL LINE
:FM/AM VCAP SIGNAL LINE
:AM OSC SIGNAL LINE
:FM OSC SIGNAL LINE



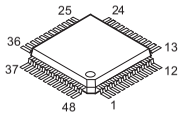

:FM SIGNAL LINE
:AM OSC SIGNAL LINE
:POSITIVE VOLTAGE LINE
:MAIN SIGNAL LINE
:FM/AM VCAP SIGNAL LINE
:FM OSC SIGNAL LINE
Q308
DTA143ZETL
SOLENOID DRIVE
Q305
2SD1328STXRA
SOLENOID DRIVE
LCD1(RSL5224-T)
LCD DISPLAY
IC4
AK93C45BH-L
EE PROM
IC3
TC9328F206BS
SYSTEM CONTROL/
LCD DRIVE
Q151
2SK1067-4-TL
STABILIZER
Q152
Q153
Q152,153
2SD2216STX
FM/AM LOOP FILTER
Q302
DTA143ZETL
TAPE END DET.
Q301
2SD2216STX
TAPE END DET.
P301
CNB1002002AU
S301
(MECHANISM DET.
FWD/STOP/REV)
S302
(HOLD)
S312
(RADIO/BAND)
S313
(FF,+)
S314
(REW,-)
S316
(BATT/
SOUND SEL)
S317
(TUNING MODE)
S318
TP46
1.5V
2.2V


A MAIN CIRCUIT
:POSITIVE VOLTAGE LINE
:MAIN SIGNAL LINE
:FM SIGNAL LINE
1.5V
Q23
2SB815B7TX
DC-DC CONV.
C24
2200P
R22
47
R23
470
Q24
2SD1048X7TX
DC-DC CONV.
(1.3V)
D21
MA729TX
L23
R29
4.7
C25
C26
4V6.8
C28
1
C34
4V100
Q21
2SB1295-6-TB
POWER SUPPLY
L22
D23
MA8120MTX
D22
MA728TX
L21
(1.5V)
C23
C22
4V22
C21
Q25
2SD1328STXRA
DC-DC CONV.
C27
0.22
R25
4.7K
C31
0.01
C29
0.1
R21
330
Q22
DTC143ZETL
POWER SUPPLY CONT.
4.7K
47K
SL2
C360
0.1
Q307
2SB1295-6-TB
POWER SUPPLY
Q306
UN9215TX
POWER SUPPLY
CONT.
C366
1
C326
2.5V150
Q309
R343
5.6K
10K
0.8V
0.9V
Q309
2SB1462STX
POWER SUPPLY
R359
22K
C710
2.5V68
L701
R703
470
C703
100P
C702
100P
C720
2.5V68
L702
R704
470
RJ71
0 Ω
L704
L705
L703
JK1
HEADPHONES
50 Ω (φ3.5)
R325
33K
R326
56K
R327
120K
C317
0.022
C303
100P
MW
VD IN
RIP
MW
OUT1
MW
OUT2
MW
OUT3
MW
OUT4
CD
VIN1
MWVD
VD1
VD2
PFM DC/DC
VOUT
EXT
LX
Vss
EN
VIN2
VDET2
VDET1
2.2V
1.5V
1.4V
IC7
XC651A1004VR
MULTI POWER SUPPLYER
TP4
R62
470K
L51
C53
4V22
C364
0.047
D52
SB00703QTL
BATTERY CASE
BATTERY 1.5V
R6/LR6,AA,UM-3
RECHARGEABLE
BATTERY 1.2V
S13-1
(TAPE IN/OUT)
S13-2
(TMETAL/NORMAL)
C301
220P
C362
220P

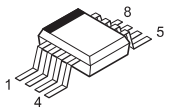
MM1279XVBE	20PIN
XC651A1004VR	16PIN
TA2111FNEL	24PIN



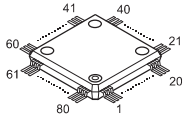
AN7500FHQ-EB



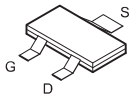
AK93C45BH-L

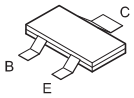


TC9328F206BS



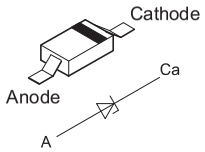
2SK1067-4-TL



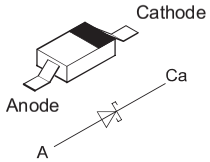


2SB815B7TX	2SC3935TX	DTC143ZETL
2SB1295-6-TB	2SD1048X7TX	UN9110TX
2SB1462STX	2SD2216STX	UN9115TX
2SB815B6TB	2SD1328STXRA	UN9210TX
2SC3931CTX	DTA143ZETL	UN9215TX

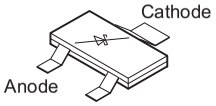
MA8120MTX



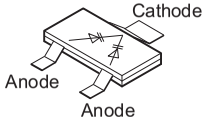
MA729TX
MA728TX



SB00703QTL



KV1610STL2-0
KV1450TL3-4



FWD/REV/STOP detect switch

S302:

Hold switch (HOLD)

S312:

Radio/band select switch (RADIO/BAND)

S313:

FF/tuning + switch (FF/+)

S314:

REW/tuning - switch (REW/-)

S316:

Sound select / battery condition check switch (SOUND SEL/BATT)

S317:

Tuning mode select switch / (TUNING MODE)

S318:

Playback / direction switch (**)**

S336:

Stop / power off switch (**/OFF)**

VR1:

Volume control VR (VOLUME)

VR601:

Tape speed adjustment VR

- DC voltage measurements are taken with electronics voltmeter form negative terminal of battery.

No mark

: Tape playback

< >

: Radio (FM)

( )

: Radio (AM)

- Battery current consumption:

Volume min.:

Radio (FM).....47mA

Radio (AM).....37mA

Tape (FWD Playback).....36mA

Volume max.:

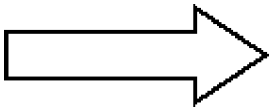
Radio (FM).....51mA

Radio (AM).....41mA

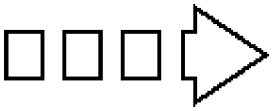
Tape (FWD Playback).....41mA

- Voltage and signal line

: Positive voltage line

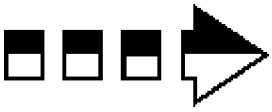


: FM signal line



: FM OSC signal line

: AM OSC signal line



: FM/AM Vcap signal line

: Tape playback signal line

: Main signal line

10. Schematic Diagram

11. Printed Circuit Board Diagram

12. Terminal Function of ICs

12.1. IC3 (TC9328F206BS): / System Control / LCD drive

Pin No.	Terminal Name	I/O	Function
1 | 4	COM1 | COM4	O	LCD common signal output
5 | 19	S1 | S15	O	LCD segment signal output
20	S16	-	Not used, open
21	CS	O	EEPROM CS output
22	SK	O	EEPROM serial clock output
23	DI/O	I/O	EEPROM data input/output
24	NO USE	-	Not used, open
25	DATA I/O	I/O	Remote control serial data input/output
26	MONO L	O	FM mode control signal output
27	SOL	O	Solenoid drive signal output
28	OPEN	I	Tape in/out detect signal input
29	FM H	O	FM power control / band select signal output
30	AM H	O	AM power control / band select signal output
31	V_{DD}	I	Power supply
32	DOLBY	O	Dolby control signal output
33	XBS	O	XBS control signal output
34	RA DD ON	O	Radio ON signal output
35	TA DD ON	O	Tape ON signal output
36	BEEP	O	Beep signal output
37	NC	-	Not used, open
38	REV	I	REV play detect signal input
39	FWD	I	FWD play detect signal input
40	NC	-	Not used, open
41	TEST	-	Test terminal (Not used, connected to GND)
42	NO USE	-	Not used, connected to VDD

Pin No.	Terminal Name	I/O	Function
43	DATA INT	I	Remote control signal input
44	END	I	Tape end detect signal input
45	NC	-	Not used, connected to GND
46	TPS IN	I	XBS control signal input
47	GND	-	GND
48	FM OSC	I	FM OSC signal input
49	AM OSC	I	FM OSC signal input
50	V_{DD}	I	Power supply
51	SWITCH	-	Not used, open
52	D01	O	Tune frequency control signal output
53	VREG	-	Phase comparete (connected to capacitor)
54	REM SELECT	I	Remote controller type select signal input
55	STOP KEY	I	STOP switch signal input
56	HOLD	I	HOLD switch signal input
57	SCAN H	-	Not used, open
58	SHIMUKE / CHI	I	Area select signal input
59	BATT	I	Battery check signal input
60	KEY1	I	Operation switch signal input
61	KEY2	I	Operation switch signal input
62	REV L	O	Head switching control signal output
63	POW ON	O	Power control signal output
64	ASC	O	Sound control signal output
65	MUTE	O	Muting control signal output
66	PH CONT	O	Photocoupler control signal output
67	MOT	O	Motor control signal output
68	CCW	O	Motor reverse drive control signal output
69	SPEED	O	Motor speed up control signal output
70	RESET	I	Reset signal input
71	XOUT	O	Crystal OSC output (75 kHz)
72	XIN	I	Crystal OSC input (75 kHz)
73	GND	-	GND
74	VDB	-	LCD power booster control

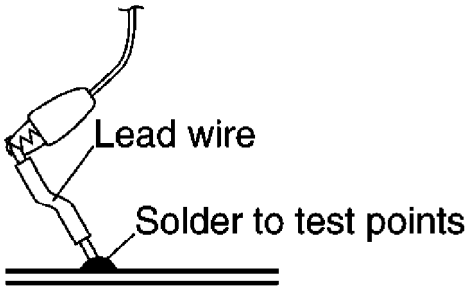
Pin No.	Terminal Name	I/O	Function
75	C1	-	LCD power booster control
76	C2	-	LCD power booster control
77	VEE	-	LCD power booster control
78	C3	-	LCD power booster control
79	C4	-	LCD power booster control
80	VLCD	-	LCD power booster control

13. Measurements and Adjustments

13.1. Preparation for Adjustment

Follow step1 to step 6 in item on "Checking for the main P.C.B. (A side)" for Operation Checks and Component Replacement Procedures.
Connect lead wire for test points TP101 and TP102. / Refer to Fig. 13-1.

Fig. 13-1



13.1.1. Measurement Condition

1. Set volume control to maximum.
2. Set Dolby NR switch to OFF.
3. Release the head state.
4. Set power source voltage to 1.3 V±0.5V DC.

13.1.2. Control Positions and Equipment Used

1. Signal generator (AM/FM)
2. Oscilloscope
3. Frequency counter
4. Test tape (QZZCWAT)

13.2. Tuner section

13.2.1. AM RF Adjustment

1. Fashion a loop of several turns of wire and radiate a signal into

the loop antenna of receiver.

2. Connect the oscilloscope to headphones jack. / Refer to Fig. 13-2.
3. Set the unit to AM mode.
4. Set AM-SG to 594 kHz.
5. Receive 594 kHz in the unit.
6. Adjust L202 for maximum output.
7. Adjust L203 for maximum output.

13.2.2. FM RF Adjustment

1. Connect the FM signal generator to TP101(+) and TP102(-).
2. Connect the oscilloscope to headphones jack. / Refer to Fig. 13-2.
3. Set the unit to FM mode.
4. Set FM-SG to 90 MHz.
5. Receive 90 MHz in the unit.
6. Adjust CT101 for maximum output.

13.3. Tape section

13.3.1. Tape speed Adjustment

1. Connect the frequency counter to headphones jack. / Refer to Fig. 13-2.
2. Playback the central part of the tape and adjust VR601 so that the tape speed is as follows.

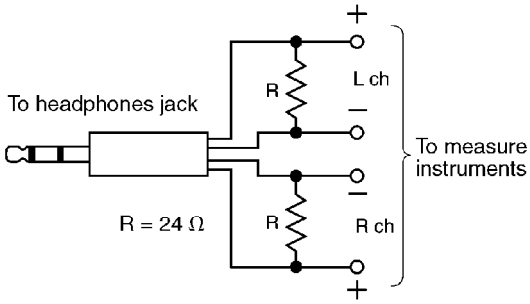
   - Forward: 3005 ± 15 Hz
   - Reverse: 2970 - 3040 Hz

   Make sure that the frequency range in within ± 60 Hz for between Forward and Reverse mode.

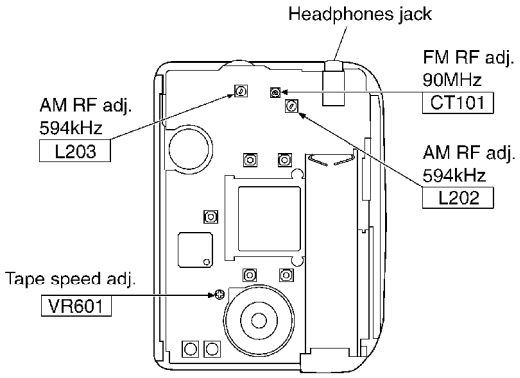
Note:

The playback head is supplied on the head arm assembly/
The assembly requires no adjustment.

Fig. 13-2



Adjustment Point



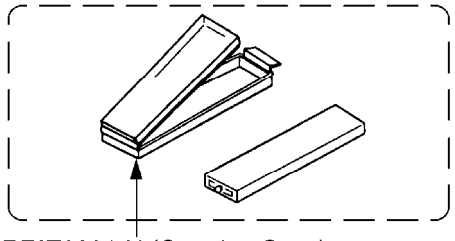
14. Supply of Rechargeable Battery as Replacement Parts

Please take note of the following points relating to Carrying Case to be used for protection of Rechargeable Battery from shorting.

Replacement Parts:

- **Rechargeable Battery (RP-BP61PYS11) to be supplied will be provided with Carrying Case (RFAT0001-H)**
- **No replacement parts will be supplied for Rechargeable Battery without Carrying Case.**
- **Replacement parts will be supplied for Carrying Case (RFAT0001-H) without Rechargeable Battery.**
- **To your customers, delivery Rechargeable Battery together with Carrying Case to prevent shorting accidents that may occur when Rechargeable Battery is carried about without Carrying Case.**

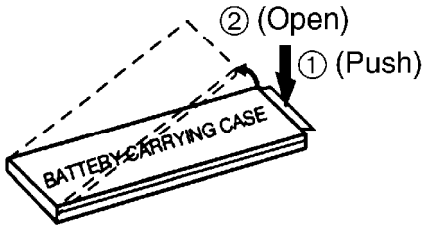
RP-BP61PYS11
(Rechargeable Battery with Carrying Case)



RFAT0001-H (Carrying Case)

15. Caution in use of Rechargeable Battery

- Take Rechargeable Battery out of Carrying Case and use it.
- Be sure to carry Rechargeable Battery in this Carrying Case. / If not, may either heat or ignite by shorting with a metal.



16. Replacement Parts List

Notes:

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
- The marking (RTL) indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
- All parts are supplied by MESA.
- The marking (TAMACO) indicates in Remarks columns are

supplied by TAMACO.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RHD14057-S	SCREW	2	(TAMACO)
2	RHD14059-S	SCREW	4	
3	RKK0127-1S	BATTERY COVER	1	
4	RHQ0032-S	SCREW	2	(TAMACO)
5	RHQ0062-S	SCREW	2	(TAMACO)
6	RXMT0002	LINK UNIT	1	(TAMACO)
7	ZA5SX77VP-S	CASSETTE LID UNIT	1	(TAMACO)
8	ZA6SX30-S	HINGE UNIT	1	(TAMACO)
9	RGU1753-1S	BUTTON,PLAY/STOP ETC	1	
10	RGU1754-H	BUTTON,TUNING MODE	1	
11	RGV0227-H1	KNOB,HOLD	1	(TAMACO)
12	ZA3SX77VGCSS	CABINET ASS'Y	1	(TAMACO)
13	ZA4SX80V-S	MAIN CABINET	1	(TAMACO)
14	RHQ0013-1	SCREW	1	(TAMACO)
15	RJC99027	R.BATT.TERMINAL(+)	1	(TAMACO)
16	RJC99028	R.BATT.TERMINAL(-)	1	(TAMACO)
17	RJH9208-1	CONNECTION TERMINAL	1	(TAMACO)
18	RGP0729-Q1	LCD PANEL	1	(TAMACO)
19	RHQ0079-Y	SCREW	3	(TAMACO)
20	RSL5224-T	LCD(LCD1)	1	
21	RSQ0063	ZEBRA CONNECTOR	1	
22	RHQ0060-N	SCREW	6	(TAMACO)
23	RJR0154-1	R.BATT.SHAFT	1	(TAMACO)
101	BFL26NB1CT	MOTOR	1	(TAMACO)
102	XQS14+A2FZ	SCREW	2	(TAMACO)
103	RHW40002	WASHER	1	(TAMACO)
104	RDV0037	BELT(1)	1	(TAMACO)
105	RDV0038	BLET(2)	1	(TAMACO)
106	RXQ0636	HEAD BLOCK ASS'Y	1	(TAMACO)
106-1	RXL0130	PINCH ROLLER ARM(F)	1	(TAMACO)
106-2	RME0187-1	SPRING	1	(TAMACO)
106-3	RXL0131	PINCH ROLLER ARM(R)	1	(TAMACO)
107	RFKRQSX75-S	MECHANISM BLOCK ASS'Y	1	
107-1	RMQ0547	HOLD PIESE(F)	1	
107-2	RHD14047	SCREW	2	(TAMACO)
107-3	RMQ0548-1	HOLD PIESE(R)	1	(TAMACO)
A1	RP-BP61PYS11	RECHARGEABLE BATTERY	1	
A1-1	RFAT0001-H	BATT.CARRING CASE	1	(TAMACO)
A2	RFAT0002-H	BATTERY CASE	1	(TAMACO)
A3	RFC0056-K	CARRING CASE	1	(TAMACO)
A4	RFEV012P-KS	REMOTE CONTROLLER	1	
A5	RFEV711P-KY	STEREO HEADPHONES	1	(TAMACO)
A5-1	STE31H-K3	EAR PAD	2	
A6	RP-BC156BPY	BATTERY CHARGER	1	(TAMACO) ⚠
A7	RQCB0391	SERVICE CENTOR LIST	1	
A8	RQTT0335-P	INSTRUCTION MANUAL	1	(TAMACO)
C21	ECUVNA105ZFV	10V 1U	1	
C22	ECST0GY226R	4V 22U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C23	ECUVNA105ZFV	10V 1U	1	
C24	ECUE1H222KBQ	50V 2200P	1	
C25	ECUVNA105ZFV	10V 1U	1	
C26	ECST0GY685R	4V 6.8U	1	
C27	ECUVNA224KBV	10V 0.22U	1	
C28	ECUVNA105ZFV	10V 1U	1	
C29	ECUVNC104KBV	16V 0.1U	1	
C31	ECUE1C103KBQ	16V 0.01U	1	
C34	RCST0GX107RG	4V 100U	1	(TAMACO)
C53	ECST0GY226R	4V 22U	1	
C103	ECUV1H391GCV	50V 390P	1	
C105	ECST0GY226R	4V 22U	1	
C108,09	ECUE1H102KBQ	50V 1000P	2	
C111	ECUE1H470JCQ	50V 47P	1	
C112	ECUE1H680GCQ	50V 68P	1	
C114	ECUE1H050DCQ	50V 5P	1	
C117	ECUE1C103KBQ	16V 0.01U	1	
C118	ECUE1H102KBQ	50V 1000P	1	
C123	ECUE1H102KBQ	50V 1000P	1	
C151	ECUVNC104KBV	16V 0.1U	1	
C153	ECUVNC474KBN	16V 0.47U	1	
C155	ECUE1H102KBQ	50V 1000P	1	
C157	ECUE1H120JCQ	50V 12P	1	
C158	ECUVNA105ZFV	10V 1U	1	
C160	ECUE1H102KBQ	50V 1000P	1	
C162	ECUE1H102KBQ	50V 1000P	1	
C201-03	ECUE1C104ZFQ	16V 0.1U	3	
C204	ECUE1H020CCQ	50V 2P	1	
C205	ECUE1C153KBQ	16V 0.015U	1	
C206	ECUENC333KBQ	16V 0.033U	1	
C207	ECUV1H391GCV	50V 390P	1	
C210	ECUE1H150JCQ	50V 15P	1	
C211	ECUE1H102KBQ	50V 1000P	1	
C215	ECST0GY475RR	4V 4.7U	1	
C216	ECUVNA105KBN	10V 1U	1	
C217	ECUE1C223KBQ	16V 0.022U	1	
C218	ECUV1H471GCV	50V 470P	1	
C221	ECUE1H103ZFQ	50V 0.01	1	
C223	ECUENJ104KBQ	6.3V 0.1U	1	
C225	ECUVNA224KBV	10V 0.22U	1	
C226	ECUE1H101KBQ	50V 100P	1	
C227	ECUVNA105ZFV	10V 1U	1	
C228,29	ECUE1C103KBQ	16V 0.01U	2	
C230,31	ECUENJ683KBQ	6.3V 0.068U	2	
C232	ECUENJ104KBQ	6.3V 0.1U	1	
C233	ECUE1C223KBQ	16V 0.022U	1	
C234	ECUENJ104KBQ	6.3V 0.1U	1	
C235	ECUVNA105ZFV	10V 1U	1	
C236-38	ECUE1H102KBQ	50V 1000P	3	
C239	ECUE1C104ZFQ	16V 0.1U	1	
C240	ECUVNC104KBV	16V 0.1U	1	
C300,01	ECUE1H221KBQ	50V 220P	2	
C302	ECUV0J474KBV	6.3V 0.47U	1	
C303	ECUE1H102KBQ	50V 1000P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C304	ECUE1C104ZFQ	16V 0.1U	1	
C307	ECST0GY106R	4V 10U	1	
C308-11	ECUENJ104KBQ	6.3V 0.1U	4	
C312	ECUE1C104ZFQ	16V 0.1U	1	
C313,14	ECUE1H050DCQ	50V 5P	2	
C316	ECUE1H221KBQ	50V 220P	1	
C317	ECUE1C223KBQ	16V 0.022U	1	
C320	ECUE1E472KBQ	25V 4700P	1	
C326	RCST0EX157RG	2.5V 150U	1	(TAMACO)
C360	ECUENJ104KBQ	6.3V 0.1U	1	
C362	ECUE1H221KBQ	50V 220P	1	
C364	ECUENA473KBQ	10V 0.047U	1	
C366	ECUVNA105ZFV	10V 1U	1	
C501-04	ECUE1H821KBQ	50V 820P	4	(TAMACO)
C505	ECUE1C223KBQ	16V 0.022U	1	
C506,07	ECST0EY336R	2.5V 33U	2	(TAMACO)
C508	ECUE1C223KBQ	16V 0.022U	1	
C509	ECUE1H681KBQ	50V 680P	1	
C511	ECUENA473KBQ	10V 0.047U	1	
C512	RCST0EY156RG	2.5V 15U	1	
C513	ECST1CY225R	16V 2.2U	1	(TAMACO)
C514	ECUE1E332KBQ	25V 3300P	1	
C515	ECUVNA105ZFV	10V 1U	1	
C516	ECUE1C103KBQ	16V 0.01U	1	
C517	ECUE1E332KBQ	25V 3300P	1	
C518	ECUVNA105ZFV	10V 1U	1	
C519	ECUE1C103KBQ	16V 0.01U	1	
C520	ECUV1C334ZFV	16V 0.33U	1	
C521	ECUVNC334ZFV	16V 0.33U	1	
C522	ECUE1C153KBQ	16V 0.015U	1	
C523	ECUE1H182KBQ	50V 1800P	1	
C524	ECUE1H681KBQ	50V 680P	1	
C525	ECUENJ104KBQ	6.3V 0.1U	1	
C526	ECUE1H681KBQ	50V 680P	1	
C527	ECUE1H182KBQ	50V 1800P	1	
C528	ECUE1C153KBQ	16V 0.015U	1	
C529-31	ECUVNA105ZFV	10V 1U	3	
C532	ECST0GY685R	4V 6.8U	1	
C533	ECUVNA154KBV	10V 0.15U	1	
C534	ECST0GY685R	4V 6.8U	1	
C535	ECUENA473KBQ	10V 0.047U	1	
C536	ECST0EY226R	2.5V 22U	1	(TAMACO)
C537	RCST0JY106TG	6.3V 10U	1	
C538,39	ECUE1E392KBQ	25V 3900P	2	
C540	ECUVNA105ZFV	10V 1U	1	
C542	ECUV1A475ZFN	10V 4.7U	1	
C543	ECUVNA105ZFV	10V 1U	1	
C544,45	ECUENJ104KBQ	6.3V 0.1U	2	
C546,47	ECUVNA105ZFV	10V 1U	2	
C548	ECUE1H222KBQ	50V 2200P	1	
C550	ECUE1H102KBQ	50V 1000P	1	
C601	ECUV0J474KBV	6.3V 0.47U	1	
C602	ECUVNA224KBV	10V 0.22U	1	
C603	ECUENJ104KBQ	6.3V 0.1U	1	

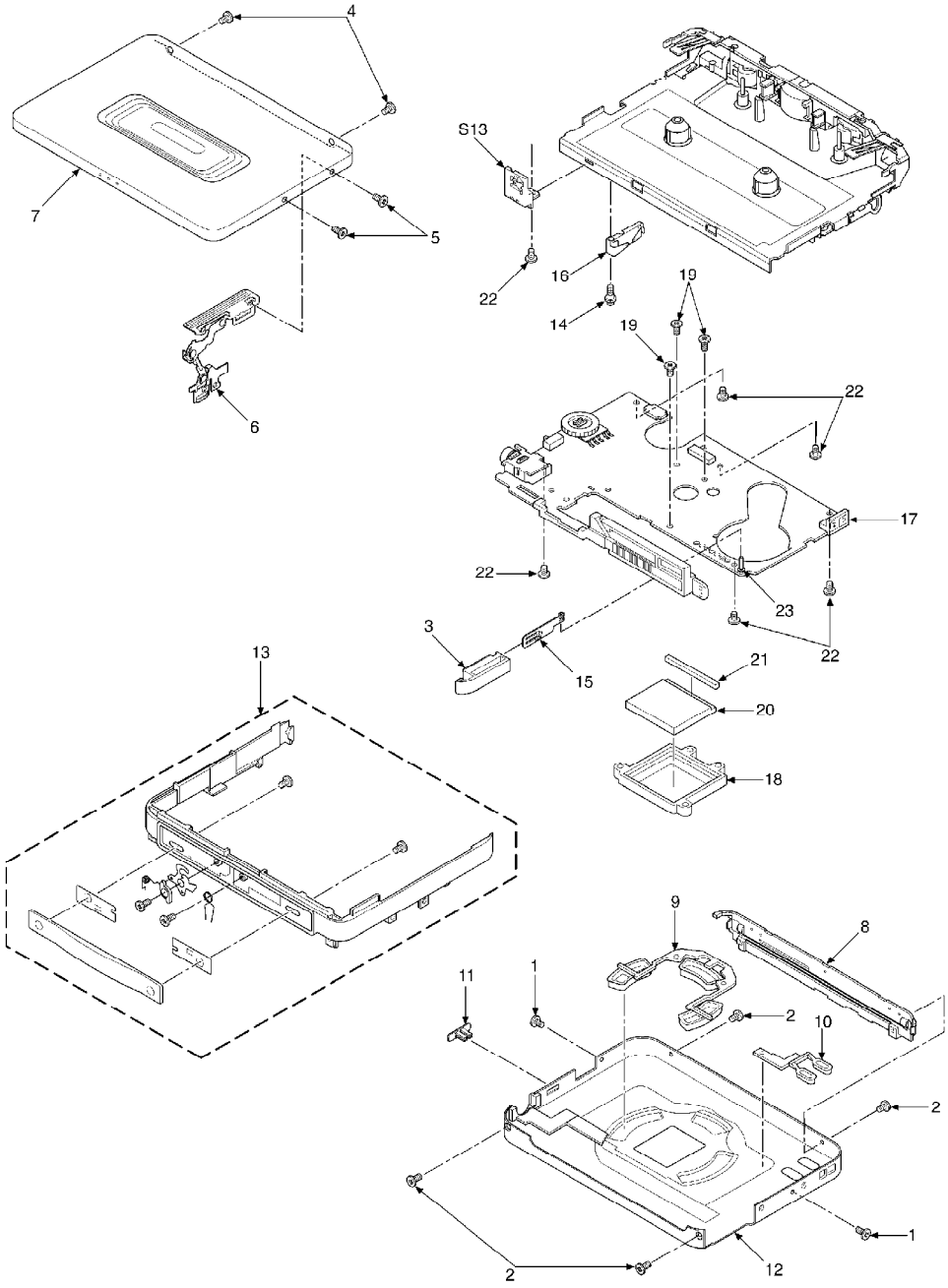
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C604	ECST0GY475RR	4V 4.7U	1	
C605	ECUENJ104KBQ	6.3V 0.1U	1	
C606-08	ECUE1C103KBQ	16V 0.01U	3	
C702,03	ECUE1H101KBQ	50V 100P	2	
C704	ECUV1A475ZFN	10V 4.7U	1	
C710	RCST0EY686RG	2.5V 68U	1	
C720	RCST0EY686RG	2.5V 68U	1	
C750	ECST0EX107R	2.5V 100U	1	
CF101	RLFFECNN01AL	CERAMIC FILTER	1	
CF201	RLFFM2X450BL	CERAMIC FILTER	1	
CF203	RLFDFC03AL	CERAMIC FILTER	1	
CN1	RJS2A1606T	CONNECTOR(6P)	1	
CT101	RCVCFA20C02X	TRIMMER	1	
D21	MA729TX	DIODE	1	
D22	MA728TX	DIODE	1	
D23	MA8120M	DIODE	1	
D52	SB00703QTL	DIODE	1	
D101,02	KV1450TL3-4	DIODE	2	
D201	KV1610STL2-0	DIODE	1	
D601	MA729TX	DIODE	1	
IC1	TA2111FNEL	IC	1	
IC3	TC9328F206BS	IC	1	
IC4	AK93C45BH-L	IC	1	
IC5	AN7500FHQ-EB	IC	1	
IC6	MM1279XVBE	IC	1	
IC7	XC651A1004VR	IC	1	
JK1	RJJ36TK03-1C	HEADPHONES JACK	1	
L21	RLBN102V-Y	COIL	1	
L22	RL09U030T-M	COIL	1	
L23	RLBN182DV-Y	COIL	1	
L51	RLQQ101KT2-D	COIL	1	
L101	RLQM121NJT-W	COIL	1	
L103	RL04Z029T-W	COIL	1	
L156	RLQP68NMT2-Y	COIL	1	
L157	RLQPR22KT2-Y	COIL	1	
L201	RLV2N058-0	ANT.COIL	1	
L202	RL02U033T-M	COIL	1	
L203	RLI2U015T-M	COIL	1	
L701-05	RLBV252AV-Y	COIL	5	
P1	RPKT0294	GIFT BOX	1	(TAMACO)
P2	RPNT0254	PAD	1	(TAMACO)
P301	CNB1002002AU	PHOTO SENSOR	1	
PCB1	PBSX77VP	P.C.B ASS'Y	1	(TAMACO)(RTL)
Q21	2SB1295-6-TB	TRANSISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q22	DTC143ZETL	TRANSISTOR	1	
Q23	2SB815B7TX	TRANSISTOR	1	
Q24	2SD1048X7TX	TRANSISTOR	1	
Q25	2SD1328STXRA	TRANSISTOR	1	
Q55	DTA143ZETL	TRANSISTOR	1	
Q102	UN9210TX	TRANSISTOR	1	
Q104	UN9210TX	TRANSISTOR	1	
Q106	2SC3935TX	TRANSISTOR	1	
Q151	2SK1067-4-TL	TRANSISTOR	1	
Q152,53	2SD2216STX	TRANSISTOR	2	
Q201	2SK1067-4-TL	TRANSISTOR	1	
Q206	UN9115TX	TRANSISTOR	1	
Q207	UN9110TX	TRANSISTOR	1	
Q208	UN9115TX	TRANSISTOR	1	
Q210	2SC3931CTX	TRANSISTOR	1	
Q211	UN9215TX	TRANSISTOR	1	
Q301	2SD2216STX	TRANSISTOR	1	
Q302	DTA143ZETL	TRANSISTOR	1	
Q305	2SD1328STXRA	TRANSISTOR	1	
Q306	UN9215TX	TRANSISTOR	1	
Q307	2SB1295-6-TB	TRANSISTOR	1	
Q308	DTA143ZETL	TRANSISTOR	1	
Q309	2SB1462STX	TRANSISTOR	1	
Q501	UN9110TX	TRANSISTOR	1	
Q502-04	UN9215TX	TRANSISTOR	3	
Q505	2SB815B6TB	TRANSISTOR	1	(TAMACO)
Q506	UN9210TX	TRANSISTOR	1	
R21	ERJ2GEJ331X	1/4W 330	1	
R22	ERJ2GEJ470X	1/4W 47	1	
R23	ERJ2GEJ471X	1/4W 470	1	
R25	ERJ2GEJ472X	1/4W 4.7K	1	
R29	ERJ2GEJ4R7X	1/4W 4.7	1	
R62	ERJ2GEJ474X	1/4W 470K	1	
R103	EXBV4V474JV	1/32W 470K	1	
R109	EXBV4V474JV	1/32W 470K	1	
R116	ERJ2GEJ472X	1/4W 4.7K	1	
R118	ERJ2GEJ104X	1/4W 100K	1	
R119	ERJ2GEJ332X	1/4W 3.3K	1	
R120	ERJ2GEJ471X	1/4W 470	1	
R151	EXBV4V103JV	1/32W 10K	1	
R153	ERJ2GEJ153X	1/4W 15K	1	
R154	ERJ2GEJ472X	1/4W 4.7K	1	
R155	ERJ2GEJ4R7X	1/4W 4.7	1	
R201	ERJ2GEJ332X	1/4W 3.3K	1	
R202	ERJ2GEJ561X	1/4W 560	1	
R203	ERJ2GEJ101X	1/4W 100	1	
R204	ERJ2GEJ474X	1/4W 470K	1	
R205	ERJ2GEJ222X	1/4W 2.2K	1	
R206	ERJ2GEJ474X	1/4W 470K	1	
R207	ERJ2GEJ473X	1/4W 47K	1	
R215	ERJ2GEJ392X	1/4W 3.9K	1	
R218	ERJ2GEJ332X	1/4W 3.3K	1	
R219	ERJ2GEJ471X	1/4W 470	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R220	ERJ2GEJ331X	1/4W 330	1	
R225,26	ERJ2GEJ563X	1/4W 56K	2	
R227	ERJ2GEJ332X	1/4W 3.3K	1	
R301,02	ERJ2GEJ474X	1/4W 470K	2	
R303	ERJ2GEJ391X	1/4W 390	1	
R304	ERJ2GEJ473X	1/4W 47K	1	
R305	ERJ2GEJ102X	1/4W 1K	1	
R306	ERJ2GEJ103X	1/4W 10K	1	
R313	ERJ3GEYD103V	1/16W 10K	1	
R316	EXB28V154JX	1/32W 150K	1	
R321	ERJ2GEJ470X	1/4W 47	1	
R322,23	ERJ2GEJ682X	1/4W 6.8K	2	
R324,25	ERJ2GEJ333X	1/4W 33K	2	
R326	ERJ2GEJ563X	1/4W 56K	1	
R327	ERJ2GEJ124X	1/4W 120K	1	
R328,29	ERJ2GEJ333X	1/4W 33K	2	
R331,32	ERJ2GEJ474X	1/4W 470K	2	
R333	ERJ2GEJ333X	1/4W 33K	1	
R334	ERJ2GEJ153X	1/4W 15K	1	
R338	ERJ2GEJ682X	1/4W 6.8K	1	
R339	ERJ2GEJ124X	1/4W 120K	1	
R340	ERJ2GEJ683X	1/4W 68K	1	
R341	ERJ2GEJ474X	1/4W 470K	1	
R343	ERJ2GEJ562X	1/4W 5.6K	1	
R344	ERJ2GEJ103X	1/4W 10K	1	
R345	ERJ2GEJ474X	1/4W 470K	1	
R353	ERJ2GEJ474X	1/4W 470K	1	
R357	ERJ2GEJ274X	1/4W 270K	1	
R358	ERJ2GEJ333X	1/4W 33K	1	
R359	ERJ2GEJ223X	1/4W 22K	1	
R503	ERJ2GEJ103X	1/4W 10K	1	
R504	ERJ2GEJ752X	1/4W 7.5K	1	
R505,06	ERJ2GEJ151X	1/4W 150	2	
R507	ERJ2GEJ752X	1/4W 7.5K	1	
R508,09	ERJ2GEJ103X	1/4W 10K	2	
R510	ERJ2GEJ822X	1/4W 8.2K	1	
R511	ERJ2GEJ182X	1/4W 1.8K	1	
R512	ERJ2GEJ153X	1/4W 15K	1	
R513	ERJ2GEJ182X	1/4W 1.8K	1	
R514	ERJ2GEJ153X	1/4W 15K	1	
R515,16	ERJ2GEJ394X	1/4W 390K	2	
R519,20	ERJ2GEJ183X	1/4W 18K	2	
R521	ERJ2GEJ473X	1/4W 47K	1	
R522,23	ERJ3GEYJ2R2V	1/16W 2.2	2	
R524	ERJ2GEJ103X	1/4W 10K	1	
R601	EXB28V154JX	1/32W 150K	1	
R603	ERJ2GEJ101X	1/4W 100	1	
R604	ERJ2GEJ123X	1/4W 12K	1	
R605	ERAS27J512V	1/10W 5.1K	1	
R606	ERJ2GEJ472X	1/4W 4.7K	1	
R607	ERJ2GEJ123X	1/4W 12K	1	
R608	ERJ2GEJ822X	1/4W 8.2K	1	
R703,04	ERJ2GEJ471X	1/4W 470	2	

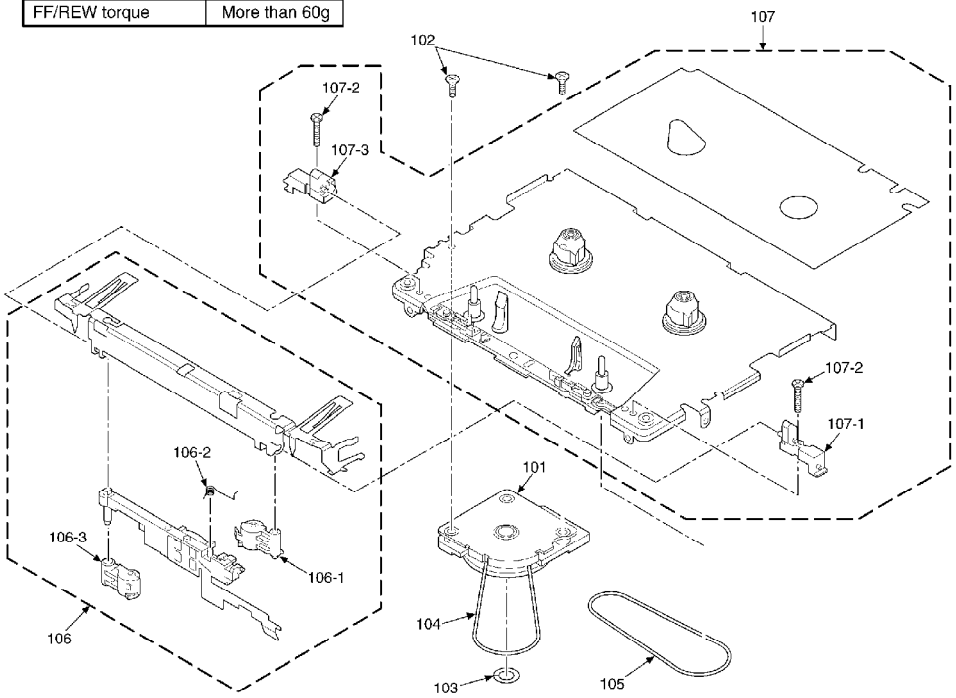
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
RJ70,71	ERJ2GE0R00X	CHIP JUMPER	2	
S13	RSH1B011-5U	SW,TAPE DET.	1	(TAMACO)
S301	RSS2A012-1A	SW,MECHANISM DET.	1	(TAMACO)
S302	RSS2A010-1A	SW,HOLD	1	
S312-14	EVQPLMA15	SW,PUSH	3	(TAMACO)
S316,17	RSG0038-P	SW,PUSH	2	
S318	EVQPLMA15	SW,PLAY	1	(TAMACO)
S336	EVQPLMA15	SW,STOP/OFF	1	(TAMACO)
VR1	EVUTUGB15A54	V.R,VOLUME	1	
VR601	EVM1CSX10B14	V.R,TAPE SPEED ADJ.	1	(TAMACO)
X301	RSXC75K0L02T	OSCILLATOR	1	

17. Cabinet Parts Location



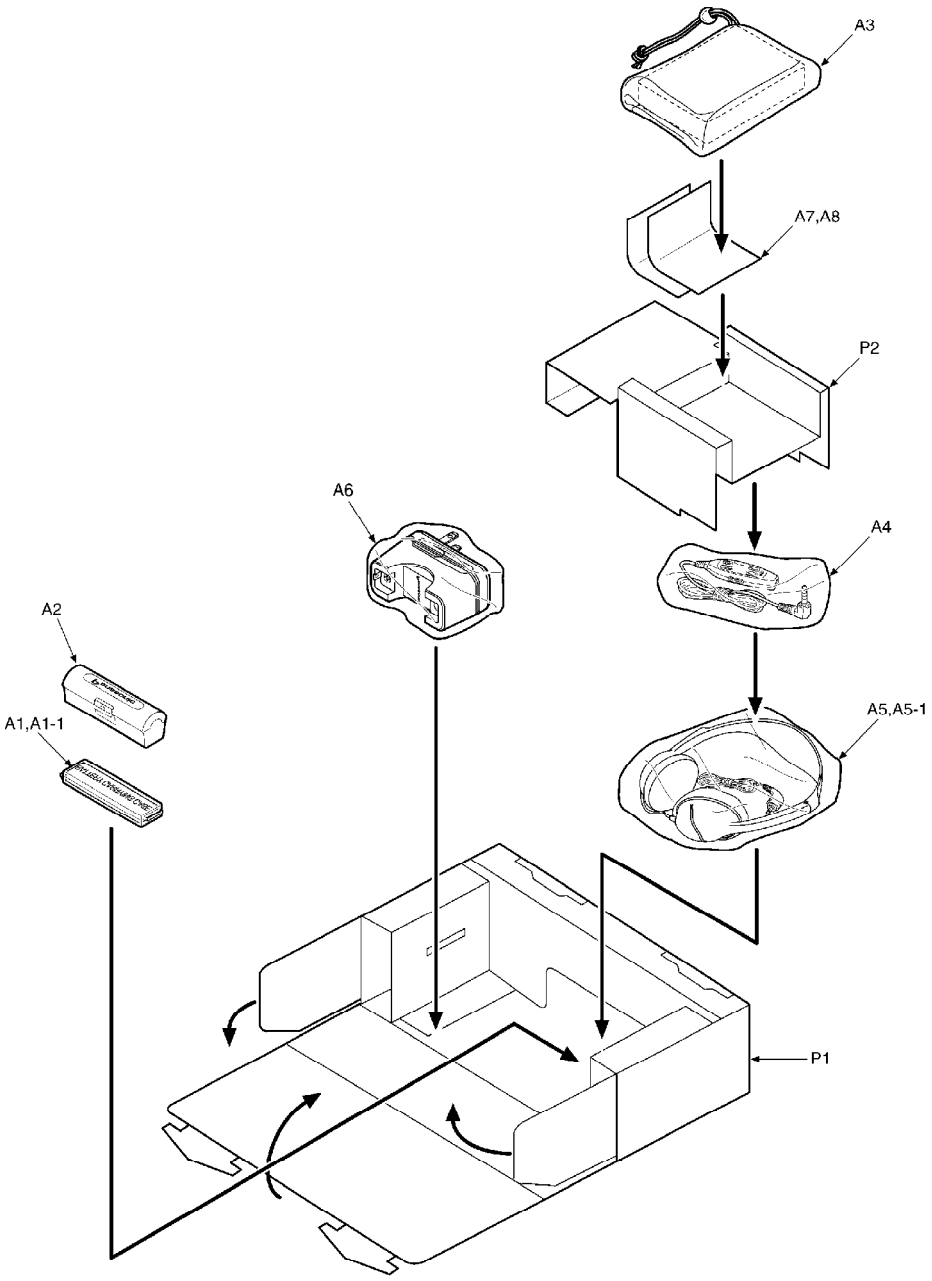
18. Mechanism Parts Location

Wow and flutter	0.3% (WRMS)
Pressure of pinch roller	110±10g
Take-up tension	More than 60g
Playback torque	20±5g
FF/REW torque	More than 60g



The parts enclosed in the dotted boxes are supplied as a block assembly. Therefore, they are not supplied separately except parts indicated with Ref.No.

19. Packaging



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